

Source of Income Discrimination and the Housing Choice Voucher Program*

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Abstract

Source of income (SOI) housing policies prohibit discrimination against prospective renters on the basis of the source of income they report on rental applications. Such policies, which have been implemented in 20 states and more than 100 local jurisdictions as of 2021, are primarily intended to prevent discrimination against applicants receiving public assistance, but these policies vary in terms of the particular *sources* of income they cover. In this paper, I examine the effects of SOI policies which explicitly protect housing choice vouchers as a protected source of income. Using county- and housing agency-level data, I exploit time-variation in the implementation of SOI policies across jurisdictions to identify the effects of these policies on renters using housing choice vouchers and the local housing agencies that administer the voucher program. I find that such policies are associated with reductions in average wait times prior to moving into rental units for voucher recipients. Additionally, I provide evidence that SOI policies increase the fraction of vouchers under lease for housing agencies with lower average utilization rates. These findings are robust to the implementation of alternative estimation strategies proposed in light of recent concerns about the internal validity of the traditional OLS with two-way fixed effects approach to estimation for difference-in-differences research designs.

Keywords: Housing Choice Vouchers, Source of Income, Housing Discrimination

JEL: R31, I38, H23, J15

“Our nation’s veterans and vulnerable families should have the same right to a home as any other American, regardless of how they pay rent. I’ve seen firsthand the impact that discrimination has on a person searching for a home. We can no longer allow these barriers to keep families and veterans from finding a stable place to live.”

– Senator Tim Kaine introducing the Fair Housing Improvement Act of 2019

1. INTRODUCTION

Housing rental applications generally feature questions about applicants’ income as a measure of their ability to make rent payments. Such applications also regularly inquire about the source of applicants’ income (e.g., “Are you employed?” or “Who is your current employer?”). Many landlords report using not just the *level* of income but also the *source* of income in determining whether or not to accept a rental application and extend a lease offer. Landlords are especially likely to report denying rental applications to applicants who report income from welfare and housing assistance programs (Garboden et al., 2018, Cunningham et al., 2018; Tighe et al., 2017). In response, 20 states including the District of Columbia and more than 100 cities and counties as of 2021 have enacted legislation preventing landlords from discriminating against rental applicants on the basis of the source of income listed on their rental applications. These policies cover income from public programs such as Social Security, Supplemental Security Income, Temporary Assistance for Needy Families (TANF), and in some cases, Housing Choice Vouchers (HCV).

Proponents of SOI policies argue that such policies expand the range of available housing options for renters receiving public assistance. By barring discrimination on the basis of source of income, renters are given a chance to “get their foot in the door” and submit applications to rental housing units which previously may have had a policy of rejecting applicants reporting income from public assistance programs (in jurisdictions without SOI policies, rental listings including phrases such as “No Section 8 Applicants” are not uncommon – see Appendix Materials A1). Advocates for these policies argue that SOI policies facilitate moves to lower poverty

neighborhoods that may offer improved amenities and economic prospects (Fasanelli & Tegeler, 2019; PRRAC, 2023). Additionally, proponents argue that SOI policies may reduce patterns of racial segregation exhibited in rental housing markets. Opponents of these policies, however, argue that SOI policies place excessive restrictions on the ability of landlords to screen prospective renters. Additionally, in the case of SOI policies that cover HCVs, such policies amount to a requirement that (at least in principle) all landlords covered by the policy must begin accepting HCVs even if they had previously declined to do so. Opponents of SOI policies which cover vouchers cite the administrative costs of renting to voucher holders including the time cost of regular reporting to local housing agencies and the HUD-mandated requirement for apartment inspections (NMHC/NAA Joint Legislative Program, 2014). Such considerations raise the possibility that landlords may simply ignore SOI policies, or engage in statistical discrimination, in order to avoid having to extend lease offers to HCV holders. It is important to note, however, that SOI policies do not bar landlords from rejecting applicants for reasons other than their reported source of income.¹

While there has been considerable popular and academic attention paid to the issue of housing discrimination in general, there has been relatively little quantitative academic work evaluating the impact of SOI laws in particular. In this paper, I assess the impact of SOI policies which prohibit discrimination against HCV recipients. Using housing agency- and county-level data, I exploit time-variation in the implementation of SOI policies across jurisdictions to identify the effects of these policies on renters using housing choice vouchers and the local housing agencies that administer the voucher program. I find evidence that SOI policies covering HCV as a protected source of income decrease the wait times prior to finding housing that HCV recipients experience. I also find that the average length of tenure in current apartment units declines for this population. Additionally, for housing agencies with below-median voucher utilization rates,

¹ Landlords may still decline to extend rental offers to applicants on the basis of other factors (including e.g., prior rental history, background checks, personal references, etc.).

SOI policies appear to increase the fraction of vouchers under lease.² These findings are robust to several alternative approaches to estimation including the use of a robust imputation estimator proposed in light of recent concerns about the internal validity of the traditional approach to estimation of two-way fixed effects models via OLS for difference-in-differences research designs.

The academic literature examining the impact of SOI policies on a similar set of housing and mobility-related outcomes is limited. Perhaps most similar to this study is a 2012 paper by Freeman and a 2014 paper by Freeman and Li. Taken together, these papers use data from 1995 to 2008 to identify the effects of SOI policies on voucher utilization rates for housing agencies and the demographic composition of the neighborhoods where voucher recipients live. Freeman (2012) reports a statistically significant increase in voucher utilization rates of between 4 to 11 percentage points, while Freeman and Li (2014) provide suggestive evidence for declines in average Census tract-level poverty rates of the neighborhoods in which voucher recipients live. Ellen et al. (2022) provide an examination of the impact of SOI policies on the locational choices of voucher program participants. They find that existing voucher holders who move following the implementation of SOI policies experience reductions in neighborhood poverty rates compared to moves made by voucher holders in the absence of such policies. They also identify changes in the demographic characteristics of neighborhoods in which existing voucher holders move, with destination neighborhoods tending to have lower rates of voucher usage and larger

² Voucher utilization rates are defined as the fraction of total housing choice vouchers issued by a local housing agency that are currently being used to rent apartments. Voucher utilization rates are an important outcome used in assessing the performance of local housing agencies by program administrators and policy advocates. A voucher utilization rate less than 100 percent implies that some fraction of available housing vouchers are unused – while this may be the case simply because a new voucher recipient is searching for rental housing (in which case the voucher will count as “utilized” once that recipient moves into a new apartment and begins using the voucher to make rental payments) it may also be indicative of broader issues with housing agency management if new voucher recipients are systematically unable to secure housing and utilization rates are persistently well below 100 percent (Rice, 2019). As a technical note, HUD’s Section 8 Management Assessment Program (SEMAP) defines a measure of utilization for housing agencies that incorporates both voucher and funding utilization; throughout this paper, I use the term “utilization” only to refer to the fraction of vouchers under lease for housing agencies.

white population shares when compared to moves made by voucher recipients in non-SOI jurisdictions.

While these papers are well-executed, my paper makes several important contributions and extensions. First, as with the Ellen et al. (2022) paper, I explore a time period during which there has been a substantial increase in the number of jurisdictions implementing SOI policies in comparison to the time period evaluated by the studies conducted by Freeman and Li; additionally, rental housing market conditions and the HCV program have shifted in important ways that may mediate the effects of SOI policies. Additionally, in comparison to prior studies, I consider a wider range of outcomes from multiple sources of data, examining the impact of SOI policies both on voucher program participants themselves as well as the local housing agencies that administer the voucher program. I document an important role for SOI policies in reducing wait times for voucher recipients prior to moving into rental units, as well as evidence that the relationship of SOI policies on voucher utilization rates has evolved from the time period assessed in prior studies. Finally, recent econometric and methodological literature has drawn attention to the potential pitfalls of the traditional approach to estimation of research designs that leverage within-unit, across-time variation in treatment via Ordinary Least Squares (OLS). Such concerns affect both the estimation of traditional difference-in-differences models, as well as event studies and pre-trends testing in such models, which have been used in prior studies of the impact of SOI policies on HCV recipients and housing agencies. I am able to draw on this developing literature to establish robust causal estimates of the effects of SOI policies on a series of housing-related outcomes.

Understanding the impact of source of income policies can help shed light on the nature and extent of discrimination within rental housing markets, in particular for housing choice voucher recipients, which is of interest both in its own right and with respect to its ability to inform low-income housing policy discussions. Prior studies examining the Moving to Opportunity (MTO) experiment, which randomly assigned vouchers to families living in public housing in high-poverty neighborhoods to allow them to move to private housing in lower-poverty neighborhoods have established the importance of neighborhood conditions on a range

of outcomes including mental and physical health, education, and earnings.³ Reaping these benefits and maximizing the social returns on investments in the housing voucher program, however, requires that families are able to secure housing in such neighborhoods; discrimination against voucher holders has the potential to lock voucher recipients into areas of concentrated poverty. Although my analysis does not find consistent evidence for changes in the characteristics of the neighborhoods in which voucher recipients live following the implementation of SOI policies, I find evidence that voucher recipients face frictions in their search for apartments in the absence of such anti-discrimination policies. The national policy context provides further motivation for the aims of this study. A hallmark of the voucher program as it currently exists is chronic underfunding – approximately 75 percent of eligible individuals are unable to receive a voucher (CBPP, 2021), and waitlists can span years in large metro areas. In response to this, members of Congress and the Biden administration have proposed substantial increases in the total number of housing vouchers issued by the Federal government. An even more sweeping proposal formed the backbone of Biden’s housing policy platform during his 2020 presidential campaign, which proposed making housing choice vouchers universal; this proposal entailed ensuring sufficient funding for the program such that everyone who qualified for a voucher would be granted one. Policymakers and policy advocates have emphasized that such expansive changes to the voucher program should be paired with policies such as SOI laws that restructure rental housing markets to deliver the highest returns on increased investments in the voucher program.

In Section 2, I summarize the history of SOI policies. I discuss my data sources and methodological approach in Section 3, and in Section 4, I present results showing that SOI policies are associated with decreases in wait times for voucher recipients prior to moving into new apartment units, while finding evidence that SOI policies increase voucher utilization rates for

³MTO has been studied extensively; see Ludwig et al., (2013) for a survey of the impact of the program on a range of outcomes including mobility, housing and neighborhood quality, mental and physical health, education, and earnings. Chetty, Hendren, and Katz (2016) provide a more recent discussion of the longer-term impacts of moves to lower-poverty neighborhoods on children in participating households.

local housing agencies with below-median pre-treatment utilization rates. Finally, in Section 5, I conclude with a discussion of the policy relevance of these findings and avenues for future research.

2. BACKGROUND

In this section, I briefly discuss the rental housing application process and the role that source of income reporting plays in that process, before describing the range of policies state and local governments have implemented in order to limit discrimination against rental housing applicants receiving public assistance. I then summarize several prior studies assessing the impact of source of income laws as well as the broader academic literature on the housing choice voucher program and housing discrimination.

2.1 The Rental Housing Application Process and SOI Policies

Securing private-market rental housing in the United States requires submitting applications to prospective landlords. While such applications can vary substantially in terms of the information they require, most rental housing applications inquire about applicants' income in order to determine their ability to pay rent reliably (popular online guides to the rental process online recommend income-verification as a core component of the tenant screening process – see e.g. Rentspree, 2021; Scott, 2021). As part of this process, rental applications may require that applicants describe the source of their reported income.

A series of studies has demonstrated that landlords screen potential applicants not just on the level of their reported income but on the source of that income. In particular, landlords report in surveys that they are disinclined to rent to housing choice voucher holders (Tighe et al., 2017). Phillips (2017) conducted a correspondence study to assess how landlords in Washington, DC responded to housing applicants who intended to use vouchers; landlords were 27 percentage points less likely to respond to applicants that expressed a desire to use a voucher compared to

those who did not. Survey and qualitative research has shed light on the reasons for this reticence to rent to voucher holders, suggesting that landlords are concerned about the “quality” of voucher holders as rental tenants, raising such concerns as the prospect of tenant damage to rental units, perceptions of increased propensity for criminality, and an elevated likelihood of requiring eviction (Cunningham et al., 2018, Garboden et al., 2018, Rosen, 2020). These perceptions, however, are frequently at odds with the characteristics of the voucher holding population as a whole. Federal regulations require that housing agencies screen voucher holders. Applicants who have committed certain categories of criminal offenses, are currently engaged in drug or alcohol abuse, or have been evicted while using a housing voucher are banned from program participation.⁴ Additionally, many housing voucher holders are from demographic groups with relatively low propensities to engage in criminal activity (U.S. Department of Justice, 2016).

Within this context, SOI policies are designed to prevent landlords from initially screening applicants on the basis of their reported income sources. Under such policies, landlords are prohibited from posting rental listings with express restrictions on the sources of income of prospective renters (e.g., placing “no Section 8” in a rental advertisement or requiring that all applicants must be employed – section Appendix Materials A1 for examples of such listings). Additionally, landlords are prohibited from placing requirements on income sources during the application process itself (e.g., requiring pay stubs or employer contact information). SOI policies do not, however, bar landlords from declining to extend a lease offer to applicants with protected sources of income for reasons other than their reported income sources. As part of a rental applicant screening process, landlords may still collect information related to prospective renters including prior rental history, background checks, and personal references; they are free to decline to prospective renters on the basis of this information.

The first SOI policy was implemented in 1971 in the state of Massachusetts. In the years that followed, more than 20 states including the District of Columbia and 100 counties and cities

⁴Curtis, Garlington, and Schottenfeld (2013) note that while HUD stipulates a basic set of screening criteria for HCV holders, local housing agencies have generally elected to augment these criteria with restrictions on e.g., additional criminal or drug-related offenses considered disqualifying from voucher reciprocity.

have implemented SOI policies. In recent years, source of income policies have received attention from national policymakers, including being featured as components of housing policy platforms offered by then-Democratic Presidential candidate Joe Biden and Senator Elizabeth Warren, with Senator Warren's campaign platform calling for a nationwide SOI policy that would cover HCV as a protected source of income (Warren, 2019).

It is important to note that SOI policies are not homogenous across jurisdictions and that such policies vary in terms of exactly what sources of income are covered; some jurisdictions implemented SOI policies which were ambiguous with respect to their coverage of vouchers as a protected source of income which were later clarified by judicial rulings, while other jurisdictions specifically exempted HCVs. In this paper, I consider only SOI policies which cover HCVs as a protected source of income, either through their explicit mention in relevant legislation or as a result of subsequent judicial rulings. In Table 1, I note several cases in which the coverage of HCVs by state-level SOI policies has been impacted by subsequent legislative amendments and judicial rulings. Several studies have noted that compliance with SOI policies is imperfect and landlords in jurisdictions with SOI policies may continue to screen applicants on the basis of reported income sources. Additionally, the enforcement practices for violations of SOI policies can vary across jurisdictions as noted by Tighe et al. (2017).⁵

2.2 SOI Policies and the Housing Choice Voucher Program

The Housing Choice Voucher program is the largest federal rental assistance program, providing assistance to 5 million people living in more than 2 million households across the United States (CBPP, 2021). Because the HCV program is not an entitlement program, and funding in recent decades has not grown sufficiently to match the demand for vouchers among eligible households, the number of eligible households far exceeds the supply of new vouchers each year, with only

⁵ The Urban Institute (Greene et al., 2020) has collected a range of measures intended to facilitate the categorization of SOI policies along such dimensions as assignment of a designated office or department to handle policy violations and enumeration of penalties for violations.

25 percent of voucher-eligible households receiving housing assistance of any kind (Fischer et al., 2021). The HCV program is targeted to low-income households, with the Department of Housing and Urban Development (HUD) setting policy guidelines at the Federal level, and local housing agencies responsible for the day-to-day administration of the program. While housing agencies may set additional criteria for voucher assignments, agencies are required by HUD to ensure that the majority of HCV recipients have household incomes either below the poverty line, or 30 percent of local median incomes, with the higher of the two criteria binding for a given housing agency (CBPP, 2021).

Households who apply for and receive a voucher are given a finite amount of time to find private-market housing that will accept vouchers as a form of rental payment.⁶ HUD calculates local payment standards, which determine the maximum rental price vouchers will subsize. Having secured a suitable rental unit, with a landlord willing to accept HCVs, voucher holders are then required to pay up to 30 percent of their household income (or \$50, in the event that 30 percent of their household income does not exceed that amount) as rent each month to their landlord. The remaining balance is paid by the local housing authority directly to the landlord; indeed, for landlords who rent to voucher holders the payment stability afforded by this arrangement is frequently cited as being an appealing component of participation in the program (Garboden et al., 2018).

An important feature of the HCV program is the requirement that rental units pass an initial inspection administered by local housing authorities. This inspection is intended to confirm the habitability of the rental unit according to Federally mandated guidelines; landlords who report declining to rent to HCV holders in survey research often state that such inspections are one of their primary motivations. Qualitative research conducted by Greenlee (2014) finds that the time costs associated with waiting for inspections is a particular concern for landlords. SOI

⁶ Per HUD regulations, voucher recipients generally have at least 60 days following the award of the voucher to search for a rental unit although local housing agencies are able to extend this time period. Vouchers which go unused because the recipient was unable to find housing are awarded to a new applicant and applicants who were unable to secure housing must reapply for a new voucher (CBPP, 2021).

policies that specifically cover HCV recipients, then, in effect mandate participation in this inspection process insofar as landlords are induced to extend the lease offers to HCV recipients as a result of these policies (NMHC/NAA Joint Legislative Program, 2014).⁷

2.3 Relevant Academic Literature

There are a handful of papers examining source of income policies and outcomes similar to this paper. Perhaps the most closely related is Freeman (2012), which examines the relationship between source of income policies and the voucher utilization rates of local housing agencies.⁸ Using data from 1995 to 2008, this study employs a difference-in-differences strategy identification strategy to compare the utilization rates of housing agencies in jurisdictions that implemented SOI policies to agencies located in neighboring jurisdictions that did not implement such policies. The author finds that SOI policies are associated with increases in voucher utilization rates of approximately 4 to 11 percentage points. While capably executed, there are several limitations the author faced which this present study is able to bypass. As noted previously, recent methodological papers have raised concerns about the estimation of difference-in-difference models via OLS. Additionally, the sample time period used in the above study (1995-2008) offers limited identifying variation in terms of SOI policy implementation. Given a limited number of jurisdictions treated by SOI policies, traditional approaches to inference may yield inconsistent estimates, which is a limitation of inference more generally in

⁷ These inspections are intended to satisfy the HCV's program mandate to provide "decent, safe, and sanitary" housing for participants; as part of the program, a set of minimum housing quality standards (HQS) are defined which assess rental units across 13 broad criteria including their structural integrity, the presence of environmental health risk factors such as lead paint, and accessibility. These inspections are conducted prior to move-in and on an annual basis for units rented by voucher holders (HUD, 2001).

⁸ The findings from this study were published both as academic publication and as a report produced for HUD's Office of Policy Development and Research (Freeman, 2011).

two-way fixed effects specifications with a small number of treated units (Abadie et al., 2022).⁹ In the years since the period analyzed in this study, SOI policies have become increasingly common, allaying concerns about limited policy variation.

Also related are two papers which consider the impact of SOI policies on the locational choices of voucher recipients – Freeman and Li (2014) and Ellen et al. (2022). Using a similar empirical approach as Freeman (2012), Freeman and Li (2014) examine the relationship between SOI policies and the demographic characteristics of the Census tracts in which voucher recipients live. They provide suggestive evidence that SOI policies are associated with declines in the average Census tract-level poverty rates of the neighborhoods in which HCV recipients live, although these findings are not consistent across specifications.

Ellen et al. (2022) leverage individual-level data for voucher program participants to identify the impact of source of income policies on the location choices of voucher recipients. A key component of their study is the ability to observe both the origin and destination neighborhoods of voucher participants who elect to move; this allows the authors to observe changes in the relative characteristics of the neighborhoods in which voucher holders live pre- and post-move. Using a difference-in-differences identification strategy, the authors find that following the implementation of SOI policies, voucher holders who elect to move tend to do so into neighborhoods with lower poverty rates compared to moves made by voucher holders in non-SOI jurisdictions. An important contribution of this study is to document the difficulty in identifying changes in neighborhood characteristics for voucher recipients when using aggregated data (as is the case for both this paper and the Freeman and Li (2014) study). As such, while I present results on neighborhood characteristics in the discussion below, I note these limitations and elect not to draw strong conclusions from this component of my analysis.

⁹While the Freeman (2012) study features a sample of 48 housing agencies, the level of “effective” variation for the purpose of assessing the number of treated clusters in a two-way fixed effects design is the level at which the treatment of interest – SOI policies in this case – is varying. This variation occurs at the jurisdictional level; in the time period analyzed, nine jurisdictions implemented SOI policies, including two states and seven counties and cities.

I view the results presented in this study as complementary with the locational choice studies described above. I consider a wide range of outcomes, assessing the impact of SOI policies on both voucher recipients and local housing agencies. I do so using a time span (2004 to 2019), which features more variation in SOI policies than was available to the studies conducted by Freeman and Li. Importantly, I also leverage modern econometric techniques not employed in prior studies of SOI policies. Doing so allows me to provide the first causal estimates of the impacts of SOI policies that are robust to concerns about traditional OLS estimation of difference-in-differences models employed in the studies described above. Such concerns are relevant not only for traditional difference-in-differences models, but also for the estimation of event studies and for assessing the parallel trends assumption via pre-treatment dummy variables.

There is a wide-ranging literature examining the effects of the HCV program on outcomes including the effect of the voucher program on poverty and rent burdens, housing quality and locational choices, and longer-run employment, earnings, and health impacts. While I will not attempt to summarize this literature here, Ellen (2020) offers a concise review of the key findings from this literature, several of which are of specific relevance for the analysis conducted in this paper. Of particular note is the ability of vouchers to reduce rent burdens for recipients (Mills et al., 2006) and reduce the probability of recipients experiencing homelessness (Gubits et al., 2016), thereby reducing housing insecurity for recipients.

The impact of the voucher program on the locational choices of voucher holders has been more mixed. While voucher holders are more dispersed geographically than residents of public housing and less likely to live in high-poverty neighborhoods (Galvez, 2010), on average they tend to live in areas that have poverty rates that are only slightly lower than the typical low-income household (Galvez, 2010, Ellen, 2020). In addition, voucher holders tend to live in neighborhoods served by elementary schools with underperforming students, even when compared to other low-income, non-voucher recipient households (Horn et al., 2014). Given that expanded locational choice is an oft-cited argument from policy advocates in favor of the voucher program, and in light of the evidence suggesting the possible benefits of moving to higher-opportunity neighborhoods, a series of studies have attempted to explain the relatively limited

impact of voucher reciprocity on neighborhood quality. Housing search costs and social networks are an important factor (Rosen, 2020), in addition to incentives created by manner in which local payment standards are determined (Collinson & Ganong, 2018). Discrimination against voucher holders also plays an important role. Rosen (2014) documents how landlord behavior can contribute to the concentration of voucher recipients in lower-income area, while a 2018 field experiment study conducted by HUD documented high voucher-denial rates among landlords. This study also provides cross-sectional evidence across 5 cities that landlords were less likely to report that they refused to rent to voucher holders in the cities that had implemented SOI policies (Cunningham et al., 2018).¹⁰

3. DATA AND METHODOLOGY

To identify source of income policies across the United States, I begin with records collected by the Poverty and Race Research Action Council's (PRRAC) 2023 summary of these policies.¹¹ I then confirm implementation dates using relevant legislation for each jurisdiction through a search of legislative records, legal code, and news coverage. I use implementation as compared to enactment dates throughout this study in order to capture the point most closely at which SOI policies go into effect in a given jurisdiction. In Table 1, I list all state-level source of income policies as of August 2021 and flag those states with policies that specifically include housing

¹⁰ Researchers with HUD found rental listings from landlords in Fort Worth, TX, Los Angeles, CA, Newark, NJ, Philadelphia, PA, and Washington, DC. They then contacted landlords and asked if they accepted housing vouchers. In Newark and DC, which at the time of the study had implemented SOI policies, only 31 and 15 percent of landlords respectively responded that they did not lease to voucher holders, while in the remaining cities which did not have SOI policies in effect, between 67 and 78 percent of landlords reported not leasing to voucher holders (Los Angeles implemented an SOI policy subsequent to this study).

¹¹ A prior version of this paper used the 2020 version of the PRRAC's report; all tables and estimates have been updated to reflect the most recent version of the report available from PRRAC as of August 2023.

choice voucher recipients; year of implementation is also listed for each policy.¹² In Appendix Tables 1 and 2, I list the county- and city-level source of income policies across all states that were implemented as of December 2019 (the end of the time period considered in this study). In Figure 1, I plot all counties across the United States that have source of income policies in effect as of December 2019. In this figure, I map all SOI policies to counties; the corresponding legend for the figure then indicates whether the first SOI policy affecting a given county was implemented at the city, county, or state level.

3.1 Expected Relationship between SOI Policies and Housing Outcomes

Source of income laws are intended to prevent discrimination against prospective renters based on the sources of income that they report on their rental applications. For jurisdictions with source of income laws that include housing choice vouchers, landlords are barred from categorically denying applications from prospective renters who express a desire to use a housing choice voucher to pay for rent. In principle, therefore, source of income laws should expand the pool of possible rental units into which prospective renters may move, thereby reducing search costs and improving match quality. This should in turn allow voucher recipients to find better-fitting housing more quickly, an important consideration given the extended wait times prior to voucher reciprocity experienced by many applicants. Additionally, if the tendency of landlords to discriminate on the basis of sources of income is not uniformly distributed across either geographic or demographic characteristics of neighborhoods or regions, then we may expect to see a shift in the locational and demographic composition of the areas in which renters impacted by such policies live, as areas that had previously been inaccessible to prospective renters because of source of income discrimination become accessible.

¹² I also note when subsequent legislation or judicial rulings have materially impacted state SOI policies. Of particular relevance is legislation passed by the state of Texas in 2015 which preempted local SOI policies and barred local jurisdictions from implementing such policies. For further discussion, see Galvez et al., (2020).

Importantly, however, landlords may still decline such rental applications on the basis of criteria such as total monthly income, references, etc. Thus, while source of income laws may serve to help prospective renters get their foot in the door, they may still be declined the opportunity to rent a particular unit. Finally, there is the possibility that some landlords may refuse to rent to voucher holders despite the implementation of an SOI policy; by barring the ability of such landlords to state this policy openly, voucher holders may experience increased search costs as they spend time finding and submitting applications to such landlords.

Source of income laws affect both those who (1) are searching for housing on the rental market and (2) those who are currently living in rental units but may consider moving in the future. For individuals currently searching for housing, source of income laws expand the pool of possible rental units to which they may apply and ultimately reside. However, source of income laws also affect the future choices of residents who are currently occupying rental housing but whose housing choice was made across a constrained set of housing options prior to the implementation of source of income laws. Ericksen and Ross (2013) provide evidence that new voucher recipients may opt for readily available housing upon receipt of their voucher in order to “lock in” their voucher and then conduct a further search, and possible move, at a later date. Therefore, residents who currently reside in rental housing may elect to move as potential match quality is improved through the implementation of source of income laws, and the commensurate expansion in the range of accommodations both specific to the housing unit itself as well as neighboring characteristics. It is important to make a distinction between the average and marginal voucher recipient in the context of assessing the impact of source of income laws on voucher holders. Average tenure for housing choice voucher holders is approximately 65 months in the sample considered in this paper, and therefore, for many residents who are already residing in existing accommodations, source of income laws except insofar as they induce mobility by making previously inaccessible units available, may not impact currently housed residents. In contrast, for voucher holders who have just received or will receive vouchers in the future, source

of income laws may be more immediately impactful, insofar as they expand the stock of rental housing that voucher holders are currently considering.¹³

3.2 Renter Outcomes: Department of Housing and Urban Development's (HUD) Picture of Subsidized Households (PSH)

To estimate the effect of SOI policies on renters with HCVs, I collect county-level data from the Department of Housing and Urban Development's (HUD) Picture of Subsidized Households (PSH) for the years 2004 to 2019. These data provide county-by-year records of the number of reported HCV households in addition to basic characteristics of these households and the neighborhoods in which they reside. In the first panel of Table 2, I report summary statistics for the primary outcomes from this data set used below. Throughout the analysis presented below, I restrict the sample to those 1,640 counties which have a full or "complete" panel of wait time and length of tenure data reported for each year in the sample. In Appendix Figure 2, I show a map of the counties comprising this sample. The top-20 largest counties in the US by 2019 population are all included in this sample, and counties which are omitted tend to have smaller than average populations and correspondingly smaller populations of HCV recipients.¹⁴ In Appendix Figure 1, I show the number of counties in which an SOI policy was implemented in each year from 2004 to 2019 for this sample of counties. As in Figure 1, all SOI policies are matched to counties, so that the reported counts for each year represent the number of counties treated by SOI policies at the city, county, and state level in each year.

¹³ Performance evaluation for local housing agencies distinguish between voucher utilization rates (defined above) and voucher success rates (Rice, 2019), where success rates are defined as the proportion of newly issued vouchers that are used to rent apartments (and are therefore not returned to the housing authority to be reissued to new renters). Marginal renters as described here are those captured in current or forward-looking measures of housing agency success rates. For a recent discussion of measuring voucher success rates across housing agencies, see Ellen et al., (2021).

¹⁴ Supplemental results including all available county-by-year observations are provided in Appendix Table 5; they do not differ markedly from the complete-sample results.

My analysis begins by examining the relationship between source of income laws and the characteristics of renters who use housing vouchers. I estimate the following county-level regression specification via OLS:

$$Y_{cst} = \beta_0 + \delta SOI_{cst} + \beta_1 X_{st} + \gamma_c + \tau_t + u_{cst} \quad (1)$$

Where Y_{cst} denotes the outcome of interest in county c in state s and year t and SOI_{cst} is a binary indicator set equal to 1 if an SOI policy has been implemented in county c at any point during year t . SOI policies implemented at either the state s or county c level set SOI_{cst} equal to 1; cities that implement SOI policies are matched to the county within which that city is located.¹⁵ X_{st} is a vector of state-level, time-varying controls comprised of demographic shares for female, married, Black, Hispanic, and high school graduates, as well as average age, in addition to economic controls including the average state-level employment rate, the log value of average household incomes, the fraction of families with total incomes below the poverty threshold, and the fraction of all individuals participating in SNAP and receiving SSI benefits.¹⁶ County- and year-specific fixed effects are given by γ_c and τ_t respectively. Standard error errors are clustered at the county level.

Interpreting the coefficient δ in equation (1) above as the causal impact of SOI policies on the outcome of interest Y_{cst} requires satisfying the identifying assumptions underlying difference-in-differences research designs. In particular, we require that the outcome Y_{cst} is not correlated with the implementation of SOI policies in the years prior to the actual implementation of such

¹⁵ There are two local-level SOI policies implemented by cities which overlap multiple counties – Holland, MI (parts of which are located in both Ottawa and Allegan counties) and New York City (which covers the five counties corresponding to the five boroughs of the city). In both cases, I set SOI_{cst} equal to 1 for each of these counties following the implementation of their respective local SOI policies.

¹⁶ I use state as compared to county-level controls in the baseline specification for equation (1) given the wider range of control variables available at the state-by-year level. In Section 4.3 below, I examine the impact of controlling for county-level economic conditions by including a measure of county unemployment rates.

policies in jurisdictions that implemented SOI policies; in other words, we require “parallel trends” in Y_{cst} between treated and control jurisdictions in the absence of the implementation of SOI policies. Drawing on a series of recent methodological papers that have raised concerns about traditional OLS estimation of difference-in-differences and event study specifications,¹⁷ I present the results of the estimation of an event-study variation of equation (1) above, using the imputation-based method proposed by Borusyak et al. (2021).¹⁸ Using this method, I am able to estimate both static and dynamic effects of SOI policies and conduct a robust test for pre-trends in Y_{cst} in treatment counties prior to implementation, with results that are robust to the pitfalls associated with traditional OLS estimation of event studies.¹⁹ To allay concerns about data availability and selection issues in the event study results presented below, I present event studies with a balanced sample of treated counties, such that the sample of treated counties identifying the event-time coefficients is comprised only of counties that have sufficient data to identify all such coefficients.²⁰ The event study approach described above allows us to test the degree to which outcomes Y_{cst} were trending differentially in counties where source of income laws were

¹⁷ Goodman-Bacon (2021) highlights potential pitfalls associated with OLS estimation of two-way fixed effects models to identify the effects of binary treatment implemented with differential timing including event-study specifications. A series of papers including those de Chaisemartin and D’Haultfœuille (2020), Callaway and Sant’Anna (2020), and Sun and Abraham (2020) propose alternative estimators.

¹⁸ Calculation of the results presented here was conducted using the Stata package `did_imputation` (Borusyak, 2021). Because this method requires that treatment be absorbing (meaning that no units in the analysis sample have treatment imposed and then later removed), I omit Maine and Minnesota from the analysis sample when this method is applied, as both states experienced judicial rulings nullifying their SOI policies; OLS results with a similar restriction imposed are comparable to those presented below.

¹⁹ For a detailed description the imputation method used here, as well as a useful survey of the potential issues associated with traditional OLS estimation of event studies, see Borusyak et al., (2021). For all event studies, I show corresponding imputation-based estimates of the “static” difference-in-difference estimator described in equations (1) and (2). Because estimates do not vary substantially from the OLS estimates reported in the main set of results, I report the results from OLS estimation throughout the main set of results.

²⁰ For the sake of clarity, and to align with the framing used by Borusyak et al. (2021), I use “balanced” throughout this paper only to refer to the sample of treated counties with sufficient data to identify a given set of event-study coefficients. Elsewhere, I use “complete” to refer panels of county- and agency-level data with non-missing values for key outcomes in each year of the sample (such data might in other contexts be referred to as balanced panels).

eventually implemented, thereby assessing the internal validity of the research design, and bolstering a causal interpretation of the estimates presented below.

Where there is sufficient post-implementation data, we can also extend the event-study post-period window to study the dynamic effects of SOI policies. In comparison to equation (1), which estimates the average effect of SOI policies across post-treatment years for treated counties, the event-study approach allows us to assess how the impact of SOI policies evolves over time. For example, awareness of these policies on the part of landlords and prospective renters may increase over time. As noted above, estimating event studies with a balanced sample of counties necessarily entails restricting the sample of included counties, and thus what SOI policies are contributing identifying variation to a given set of estimates. As part of the discussion of the results presented below, I will indicate when the range of SOI policies considered in a given specification is restricted beyond the policies covered in the baseline specification described in Equation (1) above.

3.3 Housing Agency Outcomes: Department of Housing and Urban Development (HUD) Voucher Management System (VMS)

To estimate the effect of SOI policies on the local housing agencies that administer housing choice voucher programs, I collect agency-level data from the Department of Housing and Urban Development's (HUD) Voucher Management System (VMS) for the years 2010 to 2019. These data provide housing agency-by-month records that report the number of total vouchers issued by the housing agency, the number of those vouchers that are under lease, and voucher utilization rates. I aggregate these data to the agency-by-year level and report summary statistics for these figures in the second panel of Table 2. As with the county-level outcomes, I again restrict the sample to those 2,076 housing agencies that present a complete panel of non-missing outcomes for the variables listed in Panel II of Table 2.

I begin by exploring the relationship between source of income laws and local housing agency-level outcomes using a variation of equation (1) from above:

$$Y_{hst} = \beta_0 + \delta SOI_{hst} + \beta_1 X_{st} + \gamma_h + \tau_t + u_{hst} \quad (2)$$

Where outcomes are now at the agency-year level, with Y_{hst} denoting the outcome of interest in housing agency h in state s and year t and SOI_{hst} again a binary indicator for the presence of a SOI policy in the city, county, or state the housing agency serves. To mirror the treatment of SOI policies in the county-level results above, I map all SOI policies implemented at the city and county level to all housing agencies located within each affected county. To match housing agencies to counties, I begin with a search of AffordableHousing.com, which provides a county-level search feature that returns a list of public housing agencies serving that county. For each county treated by a city- or county-level SOI policy, I record all housing agencies listed as serving that county. The resulting list of counties and corresponding housing agencies then serves as the foundation for my crosswalk of housing agencies to counties. This crosswalk is then complemented by confirming the results from the initial search above with a search of HUD housing agency contact information records. I confirm that the city reported in the primary address for each agency is located within the matched county. Finally, I match any housing agency not returned in the initial search above to a county if that housing agency has a city located within the matched county that is either (1) their primary address in the HUD contact records or (2) included in their agency name. Because the regression in equation (2) is estimated at the housing-agency level, this search only needs to be conducted for counties that are treated by local or county SOI policies.²¹ In an alternative specification presented below, I restrict this mapping to consider housing agencies treated by city-level SOI policies only when housing agencies have that city listed as their primary address in HUD housing agency contact information records.²² Finally, X_{st} is the same vector of state-level, time-varying controls described for equation (1)

²¹ VMS records indicate the state in which each housing agency is located, which simplifies the process of linking state-level SOI policies to agencies.

²² Because these records may not be complete, I also conducted a search of housing agencies listed as serving each city with an SOI policy on AffordableHousing.com.

above. Housing agency and year-specific fixed effects are included in γ_h and τ_t respectively. Standard error errors are clustered at the housing-agency level. As discussed above, we can also use Borusyak et al.'s imputation-based event-study estimator to both assess the internal validity of the research design used here as well as assess the longer-run effects of SOI policies.

3.4 Spatial Relationships Across Jurisdictions and SOI Policies

SOI policies have been implemented at the state, county, and local level. In this section, I discuss several ways of addressing the role that spatial relationships across jurisdictions and jurisdictional differences may play in identifying the impact of SOI policies. In Table 1, I list all state-level SOI policies implemented as of 2021 while in Appendix Tables 1 and 2, I list county- and city-level SOI policies; in each table, year of implementation is included. When the range of SOI policies considered in a particular specification is restricted beyond the set of policies included in Equation (1) above, I note this either in the text or accompanying table notes.

I take several approaches to characterizing the spatial relationship between counties and SOI policies implemented at the local level. As noted in Section 3.2, in the baseline specification for equation (1), any city or town located within county c that implements an SOI policy in time t sets SOI_{cst} equal to 1 for that county. The first alternative to this approach that I explore is to weight SOI_{cst} by the proportion of the county population that resides in the treated local jurisdiction. For this exercise, all populations are measured using Census population totals in 2010, so that the constructed weight is consistent across years within a given county.²³ This

²³ Fixing the population totals at 2010 values ensures that variation in SOI_{cst} is driven only by changes in SOI policies and not changes in population over time. For counties in which a local SOI policy is implemented and then subsequently a county or state policy is additionally implemented, I set $SOI_{cst} = 1$ in the year in which the subsequent policy is implemented to reflect the fact that the full population of the county is now treated.

To make things concrete, we can consider the example of Rochester, New York. The city of Rochester implemented an SOI policy in 2017, and is located within Monroe County, NY. In 2010, the population of Rochester was 210,565, while the population of Monroe County was 744,344. Thus, beginning in 2017, SOI_{cst} for Monroe County is set to 0.28, the quotient of the city and county populations. In 2019, the state of New York implemented an SOI policy, and thus $SOI_{cst} = 1$ in 2019 for Monroe County.

approach scales our measure of treatment to reflect the size of the most directly affected population in each county (although vouchers are portable and thus recipients are free to move around their local area), and addresses concerns that the baseline approach to estimating equation (1) above may overweight counties treated by local SOI policies. The second approach I take in assessing the relationship between counties and local SOI policies is to remove all counties treated by local SOI policies from the estimation sample.²⁴ This approach naturally results in reduced identifying variation in SOI policies; insofar as the estimated effects from this approach do not differ dramatically from baseline estimates, however, it can assuage concerns that the baseline definition of the spatial relationship between counties and local SOI policies is driving the estimates presented below.

Pooling SOI policies, such that county c may have SOI_{cst} set equal to 1 as a result of either state s , county c , or a local jurisdiction with county c , offers the advantage of leveraging as much possible identifying variation in SOI policies as is available. A concern raised by this approach, however, is that the effect of SOI policies may be mediated by the *type* of jurisdiction implementing that policy. In particular, the effect of state policies may systematically differ from county or local policies, insofar as agencies tasked with enforcing housing discrimination laws may be better staffed or funded at the state level than equivalent county or local agencies. With that in mind, I also estimate a variation of equation (1) that has been augmented with state-by-year fixed effects. The addition of state-by-year fixed effects absorbs SOI policy variation occurring at the state level, and thus the effect of SOI policies in these specifications is identified only by county and local SOI policy variation. This allows us to specifically consider the impact of SOI policies implemented by county and local governments and leverages a clear comparison group for treated counties, other non-treated counties in the same state, thereby controlling for potentially confounding unobservables that may bias our baseline estimates of equation (1).

²⁴ For this exercise, I omit all counties in which a local SOI policy is implemented, even in cases where a county or state SOI policy is subsequently implemented. The remaining sample of counties included are those counties treated only by county- or state-level SOI policies. This approach eliminates the possibility that a particular approach to defining SOI_{cst} in the presence of local SOI policies is driving estimated effects.

4. RESULTS

I begin by estimating the impact of SOI policies on renter outcomes. I show that the time that voucher holders spend waiting for housing decreases following the implementation of SOI policies, with an average decrease in wait times of approximately 18 percent. I demonstrate that these results are robust to alternative definitions of the relationship between counties and SOI policies; I then consider locational choice outcomes and several additional robustness checks. Finally, I turn to housing-agency outcomes, where I find suggestive evidence that SOI policies are associated with higher utilization rates for some housing agencies.

4.1 SOI Policies and Wait Times for Housing

I begin by exploring the effect of source of income laws on renter characteristics using county-level outcomes. In Table 3, I estimate the effect of SOI policies on the (log value) of the average wait times in months that HCV recipients report prior to moving into new rental units using their vouchers. I present results from estimating a variation of equation (1) with only county and year fixed effects in column (1), then add state-level, time-varying demographic controls in column (2), and finally estimate the full specification given in equation (1) by including state-level, time-varying economic controls in column (3). Where estimates are consistent across specifications, I will refer to column (3) as the preferred specification. Here, I find evidence that SOI policies are associated with reductions in average wait times of approximately 18 percent. Because there are limits on the amount of time voucher recipients may search for housing (mandated by HUD to be at least 60 days although local housing authorities may extend this timeline), and many local housing agencies have wait times that can extend over multiple years, reducing wait times allows renters to secure housing more quickly, and reduces the risk of losing access to their voucher.

The association of SOI policies with reduced wait times additionally suggests that renters face frictions in their search for housing in the absence of such policies. To assess our ability to

interpret this finding as a causal effect of SOI policies, I estimate an event-study specification to produce the top panel of Figure 2. I plot point estimates for the event time coefficients along with corresponding 95 percent confidence intervals. In Appendix Table 3, I provide a corresponding table of the event-study estimates used to generate this figure as well as robust estimates of equation (1). I also report the results from a robust test for the identifying assumption of parallel trends via a joint significance test that pre-treatment event time coefficients jointly differ from 0. The p-value from this test is 0.35 and thus the test fails to reject the null hypothesis indicating that the (log value) of waiting times do not exhibit differential trends prior to SOI policy implementation.

In Table 4, I estimate the effect of SOI policies on the (log value) of the average length of time in months that renters have resided in their current homes. Here, I find that the average length of residence declines in counties that implement source of income laws by approximately 3 percent (column 3). A corresponding event study is plotted in the bottom panel of Figure 2. Here, we see that the trend in average length of residence is again close to 0 in the years prior to implementation of SOI policies in treated counties, and we fail to reject the null hypothesis that length of residence was trending differentially in treatment counties compared to control counties. A corresponding table of the event-study estimates and robust estimates of equation (1), is depicted in the second column of Appendix Table 3. Across Tables 3 and 4, I interpret the pattern of evidence as suggesting that SOI policies allow voucher recipients to move into rental units in shorter periods of time. These reductions in waiting times prior to move-in are reflected in decreased average length of residence. As noted above, this may be driven both by new voucher holders finding housing who may previously have been unable to secure a rental unit prior to the expiration of their voucher as well as existing voucher holders electing to move given an expanded option set.

Following the discussion of spatial relationships across types of jurisdictions in Section 3.4, I next assess how alternative methods of defining SOI_{cst} impact the estimates from Tables 3 and 4. In Table 5, Panel 1, I weight the binary treatment indicator SOI_{cst} from equation (1) by the proportion of the county population that resides in the treated local jurisdiction. In column (1), I

report the estimated effect of this alternative treatment measure on log value of average wait times. The estimated decline in wait times from this exercise is 19 percent, relative to the baseline estimate from Table 3 of 18 percent. In the second panel, I omit all counties from the analysis sample which have an SOI policy implemented at the local level, allowing only county- and state-level policies to identify δ in equation (1). In Panel 2, column (1), I estimate a decline of 18 percent for this limited sample. The results from both Panels 1 and 2 suggest that the estimated effects of SOI policies on wait times do not differ materially across several alternative approaches to specifying the spatial relationship between local SOI policies and counties. I also consider how these alternative specifications affect the approximately 3.3 percent decline in length of residence estimated in Table 4. In first panel of Table 5, column (2), I find estimate an average decline of 3.9 percent in length of residence using the population-weighted variation of SOI_{cst} , while in Panel 2, column (2), I again estimate an average decline of 4 percent when removing counties with local SOI policies from the analysis sample. Again, across both specifications I find evidence that the findings from Table 4 are not qualitatively impacted by alternative definitions of SOI_{cst} .

4.2 SOI Policies and Locational Choice

Having demonstrated that SOI policies reduce the time voucher recipients spend prior to securing housing, I turn to the locational choices of voucher recipients. Specifically, I consider the effect of source of income laws on the demographic characteristics of the neighborhoods in which voucher recipients reside. There is a substantial academic literature on neighborhood effects and one of the primary motivations of the HCV program for legislators and policy advocates is offering the opportunity to voucher recipients to move into higher-income neighborhoods, which may offer better educational and labor market prospects, improved amenities, etc. Prior empirical and descriptive literature, however, has found that in general, HCV recipients frequently do not move into substantially higher-income neighborhoods than those from where they had previously been living (Galvez, 2010). This finding, however, may be due at least in part to discrimination that HCV holders face when searching for housing in such neighborhoods. SOI

policies may facilitate moves to higher-income neighborhoods by “opening the door” for rental housing applicants during the initial screening component of the search process. As discussed previously, however, identifying the effects of SOI policies on locational choice can be confounded by difficulties in measurement.

In Table 6, Panel 1, I begin by considering the relationship between SOI policies and average poverty rates of the Census tracts in which voucher recipients live. The estimated effect of SOI policies is imprecisely estimated across the three specifications in Panel 1, with point estimates that are uniformly indistinguishable from 0. In Panel 2 of Table 6, I evaluate the effect of SOI policies on the racial composition of the Census tracts in which recipients live, defined here as the average Census tract-level fraction of the population that is not white. Across the three columns of Panel 2, the estimated effect of SOI policies varies in both magnitude and statistical significance. The inclusion of time-varying demographic and economic controls in columns (2) and (3) yields estimates that are indistinguishable from 0. Across both panels of Table 6, there is little evidence for a consistent relationship between SOI policies and neighborhood characteristics. Given the empirical setting, which estimates the effect of SOI policies on aggregate measures of neighborhood characteristics averaged across counties, I am unable to draw strong conclusions about how SOI policies may impact the locational choices of voucher recipients.

4.3 Robustness Checks for Renter Outcomes

In this section, I consider several robustness checks to confirm that the pattern of results presented above is not sensitive to alternative specifications of the baseline equation (1). Equation (1) employs state-level, time-varying controls in order to control for possible confounding factors such as shifts in public policy or housing markets that may be correlated with housing outcomes for voucher holders and changes in housing policies including SOI policies. State- as compared to county-level controls are selected given the broader set of control measures available at the state-level. However, one may be concerned that unobserved, county-specific heterogeneity in economic or housing conditions may vary across time in such a way that is both (a) not fully

accounted for with the inclusion of county fixed effects and (b) not captured by state-level controls.

In Appendix Table 4, I consider two alternative approaches to addressing these concerns. First, I augment the baseline specification from equation (1) with county-by-year unemployment rate data taken from Bureau of Labor Statistics Local Area Unemployment (LAU) records, which provides the most widely available economic outcome comparable to the state-level economic controls included in my baseline specifications. In column (1) of Appendix Table 4, I report the estimate of δ in equation (1) with this county-level unemployment rate measure included in addition to the vector of state-level, time-varying controls included in the baseline specifications presented above. In Panel 1, column (1), I estimate the effect of SOI policies on the log value of months waiting for housing; here, I find an estimated decline in wait times of roughly 19 percent. In Panel 2, column (2), the estimated decline in length of residency using this specification is 3 percent. Across both panels, and relative to the main results presented in Tables 3 and 4 above, there is little qualitative difference in the estimated effects of SOI policies; the decision to rely on state-level, time-varying controls does not materially impact the results reported above.

In the second column of Appendix Table 4, I consider an alternative approach to controlling for unobserved, time-varying heterogeneity in local conditions which may confound the relationship between SOI policies and the outcomes considered above. In this second column, I estimate a variation of equation (1) above that includes state-by-year fixed effects terms. The time-varying, state-level controls used in the baseline specifications above are colinear with these fixed effects, and thus I retain the county-level, time-varying measure of unemployment used in column (1) in this specification. The inclusion of state-by-year fixed effects also means that the comparisons identifying δ are now made across counties *within* a given state and year. As noted in Section 3.4, this effectively restricts the sample of SOI policies contributing identifying variation to our estimates to local- and county-level policies, as state-level variation in SOI policies is absorbed by the state-by-year interactions. The benefit of this approach is that the inclusion of these fixed effects terms controls for idiosyncratic differences in state-wide rental housing markets and housing policies that may contaminate the baseline estimates presented

above. It also addresses concerns that the impact of SOI policies implemented by state governments may differ systematically from those implemented by county and local governments. However, this approach also naturally reduces the residual identifying variation in SOI policies available to estimate δ , meaning that our estimates may be less precise. In Panel 1, column (2) of Appendix Table 4, I find that the inclusion of state-by-year fixed effects results in a statistically significant estimated reduction of approximately 15 percent in average wait times. In Panel 2, I estimate a 2 percent reduction in length of average residency; this estimate, however, is not statistically distinguishable from 0, with a larger standard error than the corresponding estimate from Table 4. Insofar as the state-by-year fixed effects specification naturally reduces residual identifying policy variation, this is perhaps not surprising. Because wait times are most direct outcome of interest in assessing the impact of SOI policies on housing search efficiency, I interpret the results from this exercise as suggesting that residual unobserved heterogeneity across states does not pose a threat to the baseline identification strategy used to uncover the results presented above.

Finally, in Appendix Table 5, I assess the impact of the complete-sample restriction used to create the analysis sample of counties considered in the results from Tables 3 through 6. One concern that could be raised by this restriction is the potential for selection into the sample of counties included in the results presented above on the basis of unobserved characteristics that are correlated with either SOI policies or the outcomes of voucher recipients. To address this concern, I allow all counties which have data for a particular outcome available in a given year to be included in the regression sample for that outcome. I consider log wait times in Panel 1 of Appendix Table 5 and log length of residency in the second panel. Across both panels, the resulting estimates are consistently statistically significant and of similar magnitude to those discussed previously in Tables 3 and 4. Thus, I conclude that the complete-sample restriction does not materially impact the conclusions drawn from the results presented above.

4.4 SOI Policies and Local Housing Agencies

Having assessed the impact of SOI policies on renters, I turn to evaluating the impact of these policies on housing agency-level outcomes. A key performance measure for housing agencies is the fraction of vouchers issued by the agency that are used to lease an apartment by recipients (as opposed to sitting unused during an extended search process or being recycled back to a new recipient in the event the prior recipient was unable to find housing). Termed the voucher utilization rate, this measure is defined as the number of total vouchers issued by a housing authority that are attached to a lease agreement divided by the total number of vouchers issued by that housing authority. In Table 7, I estimate the relationship between SOI policies and housing agency-level voucher utilization rates, beginning with both components of that rate – vouchers under lease and total vouchers – in Panels 1 and 2, and then the utilization rate itself in Panel 3. Across all three panels, I find little consistent evidence for a relationship between these measures and SOI policies. In Panel 3, column (3), the estimated coefficient is approximately 0 with an associated 95 percent confidence interval of -0.4 to 0.4 percentage points. Prior estimates of the effect of SOI policies on housing agency-level utilization rates, which ranged from 4 to 11 percent, are substantially larger than the estimates produced here, a finding which suggests that the relationship between SOI policies and housing agency outcomes may have evolved in the intervening years.

One reason that SOI policies may have a muted effect on voucher utilization rates is that many housing agencies have utilization rates approaching or equal to 100 percent, meaning that all available vouchers for that agency are attached to a leased rental unit. In such a context, the scope of SOI policies to influence utilization rates is naturally limited. To explore this possibility, in Table 8, I focus on housing agencies with relatively lower utilization rates, in order to identify a sample of agencies for whom there is larger scope for SOI policies to improve voucher usage. In order to do this, I restrict the sample of housing agencies to those with below-median utilization rates over the 2004-2019 sample window. For housing agencies that are eventually treated by SOI policies, this measure is defined during the pre-treatment period. The estimated

effect of SOI_{hst} in this specification, then, identifies the effect of SOI policies specifically on housing agencies with lower utilization rates. These agencies have a higher proportion of vouchers not attached to leases, and thus SOI policies' ability to mitigate search frictions may result in an increase in lease rates for outstanding vouchers.

As in Table 7, in the first two panels of Table 8, I report the estimated effect of SOI policies on total vouchers and vouchers under lease. The primary outcome of interest, utilization rates, is reported in Panel 3. In contrast to Table 7, the coefficients are now uniformly positive, and statistically significant with the inclusion of time-varying controls in Columns (2) and (3) at the 10 percent level. In Column (3), SOI policies are associated with an increase of approximately 0.6 percentage points in utilization rates for housing agencies with below-median (pre-treatment) utilization rates. The estimated effect here should be compared against the possible scope for SOI to improve utilization rates; even in this restricted sample of housing agencies the sample average utilization rate is 97 percent. This finding implies that for agencies where SOI policies have greater scope to increase voucher usage such policies can in fact improve voucher utilization rates.

To assess our ability to interpret this estimate as the causal effect of SOI policies on utilization rates, I estimate an event study; the results from this exercise are depicted graphically in Figure 3, with coefficient estimates reported in Appendix Table 6. The evidence from applying the robust imputation estimator is mixed – while the event study shows no signs of differential trends in utilization rates in the years prior to treatment, the post-treatment estimates are imprecise. In addition, the simple DiD estimate reported in Panel 1 of Appendix Table 6 is not statistically significant. This may be caused by the lack of time-varying controls, which are not permitted with the robust imputation estimator, but which improved the precision of the OLS-derived estimates reported in Table 8. Across the evidence presented in Table 8, Panel 3, and the results from the robust imputation approach, I interpret the evidence as suggestive of a positive relationship between SOI policies and voucher utilization rates. This conclusion, however, is tempered by limited precision of the estimates and sensitive to the choice of estimator.

Next, I consider several alternative approaches to specifying the relationship between SOI policies and utilization rates. In Appendix Table 7, I consider the same sample of below-median utilization rate housing agencies considered in Table 8. However, I employ an alternative approach to specifying the relationship between SOI policies implemented across jurisdictions as described in Section 3.3 above. In this table, SOI_{hst} is set equal to 1 by local SOI policies only when that housing agency is located directly within that local jurisdiction (as opposed to serving the same county as defined above in Table 7). As before, county- and state-level SOI policies covering that housing agency will continue to set SOI_{hst} equal to 1. In the first two panels of Appendix Table 7, I again find little statistically significant relationship between the log value of either total vouchers (Panel 1) or vouchers under use (Panel 2). However, in Panel 3, I observe a similar pattern of results to those presented in Table 8, Panel 3, with coefficients that are statistically significant across all three specifications and of comparable magnitude. In column (3), I estimate an average increase of 0.7 percentage points in voucher utilization rates. I conclude from this exercise that the evidence presented in Table 8 is not sensitive to the choice of definition of SOI_{hst} .

Finally, in Appendix Table 8, I estimate variations of equation (2) with the addition of state-by-year fixed effects for the below-median sample of housing agencies. As noted above, the inclusion of these fixed effects terms controls for unobserved state-level, time-varying characteristics that may confound the relationship between SOI policies and utilization rates. In Panel 1, I estimate a variation of the specification used in Table 8, while in Panel 2, I estimate a variation of the specification used in Appendix Table 7; in both cases, the state-level, time-varying controls included in the baseline version of equation (2) are replaced by state-by-year fixed effects. Across both panels, the estimated coefficients are positive and of similar in magnitude to those reported above. However, the standard errors are larger as well, and in both panels the estimated coefficients are not statistically significant. The limited residual identifying variation in SOI policies may contribute to this lack of precision; the inclusion of state-by-year fixed effects absorbs state-level variation in SOI policies, leaving only county and local policies. This is of particular concern when estimating these specifications on the available data for housing agencies, which spans a shorter period of time (2010 to 2019, in comparison to the 2004 to 2019 time span available

for the county-level outcomes). The results from this exercise provide further context for the tentative evidence presented in Table 8 and Appendix Table 7 of a positive relationship between SOI policies and voucher utilization rates.

5. DISCUSSION

Source of income laws have been implemented in 20 states including the District of Columbia and more than 100 local jurisdictions as of 2021. This paper leverages this variation to identify the effects of these policies on renters using housing choice vouchers and the performance of housing agencies. I find that such policies are associated with reductions in average wait times of approximately 18 percent prior to moving into rental units for voucher recipients; additionally, average length of residence in current housing units declines by approximately 3 percent for voucher holders. This pattern of results suggests that HCV holders face frictions in their search for housing and that SOI policies may improve the ability of HCV holders to find suitable housing and move into housing more quickly. Using event-study specifications, I show that these findings are not due to pre-existing trends in these outcomes prior to the implementation of such policies. For housing agencies, I find suggestive evidence that SOI policies increase voucher utilization rates for agencies with lower average utilization prior to the implementation of these policies.

These findings are especially relevant in light of recent proposals from national policymakers to expand the HCV program. Legislation proposed by Democratic members of Congress has called for increased funding for the HCV program to facilitate the increased issuance of new housing vouchers. During the 2020 Presidential campaign, then-Candidate Biden's housing policy platform included a call for making the voucher program universal and granting vouchers to all eligible applicants. The findings from this paper, as well as from the broader literature on the HCV program and housing discrimination, suggest that voucher holders face frictions in their search for suitable housing. Policies that are complementary to HCV expansion such as SOI policies have the ability to reduce such frictions and maximize the social returns on additional investments in the voucher program.

Naturally, this study is not without its limitations. For one, while this study focuses on source of income policies specifically covering housing choice vouchers, source of income laws have been passed at both the state and local level which specifically exempt housing vouchers, and therefore affect a different subpopulation of low-income renters. While there is less identifying variation currently available to assess these policies, the effects of these laws may differ insofar as landlords view other sources of public assistance in a systematically different fashion from housing choice vouchers. Additionally, an important policy margin which this study does not evaluate is recent efforts that local governments and housing agencies have made to work with property owners to lessen the administrative costs and frictions associated with leasing to HCV holders. These growing efforts, while heterogeneous, have the potential to complement SOI policies by encouraging property owners to comply with anti-discrimination regulation and alleviate concerns that landlords may have about participation in the HCV program.

REFERENCES

- Abadie, A., Athey, S., Imbens, G. W., & Wooldridge, J. M. (2022). When Should You Adjust Standard Errors for Clustering? *The Quarterly Journal of Economics*, *138*(1), 1–35.
<https://doi.org/10.1093/QJE/QJAC038>
- Borusyak, K. (2021). DID_IMPUTATION: Stata module to perform treatment effect estimation and pre-trend testing in event studies. *Statistical Software Components*.
<https://ideas.repec.org/c/boc/bocode/s458957.html>
- Borusyak, K., Jaravel, X., & Spiess, J. (2021). *Revisiting Event Study Designs: Robust and Efficient Estimation*.
<https://arxiv.org/abs/2108.12419v1>
- Callaway, B., & Sant'Anna, P. H. C. (2020). Difference-in-Differences with multiple time periods. *Journal of Econometrics*. <https://doi.org/10.1016/j.jeconom.2020.12.001>
- CBPP. (2021). *Policy Basics: The Housing Choice Voucher Program*.
<https://www.cbpp.org/research/housing/the-housing-choice-voucher-program>
- Collinson, R., & Ganong, P. (2018). How do changes in housing voucher design affect rent and neighborhood quality? *American Economic Journal: Economic Policy*, *10*(2), 62–89.
<https://doi.org/10.1257/pol.20150176>
- Cunningham, M. K., Galvez, M. M., Aranda, C., Santos, R., Wissoker, D. A., Oneto, A. D., Pitingolo, R., & Crawford, J. (2018). A Pilot Study of Landlord Acceptance of Housing Choice Vouchers. In *Urban Institute*. <https://www.urban.org/research/publication/pilot-study-landlord-acceptance-housing-choice-vouchers>
- Curtis, M. A., Garlington, S., & Schottenfeld, L. S. (2013). Alcohol, Drug, and Criminal History Restrictions in Public Housing. *Cityscape: A Journal of Policy Development and Research*, *15*(3).
- de Chaisemartin, C., & D'Haultfœuille, X. (2020). Two-Way Fixed Effects Estimators with Heterogeneous Treatment Effects. *American Economic Review*, *110*(9), 2964–2996.
<https://doi.org/10.1257/AER.20181169>
- Ellen, I. G. (2020). What do we know about housing choice vouchers? *Regional Science and Urban Economics*, *80*(103380). <https://doi.org/10.1016/j.regsciurbeco.2018.07.003>
- Ellen, I. G., O'Regan, K. M., & Harwood, K. W. H. (2022). Advancing Choice in the Housing Choice Voucher Program: Source of Income Protections and Locational Outcomes. *Housing Policy Debate*, *33*(4), 941–962. <https://doi.org/10.1080/10511482.2022.2089196>

- Ellen, I. G., O'Regan, K., & Strochak, S. (2021). *Using HUD Administrative Data to Estimate Success Rates and Search Durations for New Voucher Recipients*.
<https://www.huduser.gov/portal/publications/Using-HUD-Administrative-Data-to-Estimate-Success-Rates.html>
- Eriksen, M. D., & Ross, A. (2013). The Impact of Housing Vouchers on Mobility and Neighborhood Attributes. *Real Estate Economics*, 41(2), 255–277. <https://doi.org/10.1111/J.1540-6229.2012.00342.X>
- Fasanelli, A., & Tegeler, P. (2019, November 30). Your Money's No Good Here: Combatting Source of Income Discrimination in Housing. *Human Rights Magazine*.
https://www.americanbar.org/groups/crsj/publications/human_rights_magazine_home/economic-justice/your-money-s-no-good-here--combatting-source-of-income-discrimin/
- Fischer, W., Acosta, S., & Gartland, E. (2021). More Housing Vouchers: Most Important Step to Help More People Afford Stable Homes. In *Center on Budget and Policy Priorities*.
<https://www.cbpp.org/research/housing/more-housing-vouchers-most-important-step-to-help-more-people-afford-stable-homes>
- Freeman, L. (2011). The Impact of Source of Income Laws on Voucher Utilization and Locational Outcomes. In *HUD Office of Policy Development and Research*.
- Freeman, L., & Li, Y. (2014). Do Source of Income Anti-discrimination Laws Facilitate Access to Less Disadvantaged Neighborhoods? *Housing Studies*, 29(1), 88–107.
<https://doi.org/10.1080/02673037.2013.824559>
- Galvez, M., Greene, S., Oneto, A., & Spauster, P. (2020). *Protecting Housing Choice Voucher Holders from Discrimination: Lessons from Oregon and Texas*.
<https://www.urban.org/research/publication/protecting-housing-choice-voucher-holders-discrimination-lessons-oregon-and-texas>
- Galvez, M. M. (2010). What Do We Know About Housing Choice Voucher Program Location Outcomes? A Review of Recent Literature. In *Urban Institute*.
<https://www.urban.org/research/publication/what-do-we-know-about-housing-choice-voucher-program-location-outcomes>
- Garboden, P. M., Rosen, E., DeLuca, S., & Edin, K. (2018). Taking Stock: What Drives Landlord Participation in the Housing Choice Voucher Program. *Housing Policy Debate*, 28(6), 979–1003.
<https://doi.org/10.1080/10511482.2018.1502202>

- Garboden, P., Rosen, E., Greif, M., DeLuca, S., & Edin, K. (2018). *Urban Landlords and the Housing Choice Voucher Program Urban Landlords and the Housing Choice Voucher Program: A Research Report*.
<https://www.huduser.gov/portal/publications/UrbanLandlords.html>
- Goodman-Bacon, A. (2021). Difference-in-differences with variation in treatment timing. *Journal of Econometrics*. <https://doi.org/10.1016/J.JECONOM.2021.03.014>
- Greene, S., Spauster, P., Galvez, M., & Teles, D. (2020). State and Local Voucher Protection Laws: Introducing a New Legal Dataset. In *Urban Institute*.
<https://www.urban.org/research/publication/state-and-local-voucher-protection-laws-introducing-new-legal-dataset>
- Greenlee, A. J. (2014). More Than Meets the Market? Landlord Agency in the Illinois Housing Choice Voucher Program. *Http://Dx.Doi.Org/10.1080/10511482.2014.913649*, 24(3), 500–524.
<https://doi.org/10.1080/10511482.2014.913649>
- Gubits, D., Shinn, M., Wood, M., Bell, S., Dastrup, S., Solari, C., Brown, S., McInnis, D., McCall, T., & Kattel, U. (2016). Family Options Study: 3-Year Impacts of Housing and Services Interventions for Homeless Families. *SSRN Electronic Journal*. <https://doi.org/10.2139/SSRN.3055295>
- Horn, K. M., Ellen, I. G., & Schwartz, A. E. (2014). Do Housing Choice Voucher holders live near good schools? *Journal of Housing Economics*, 23(1), 28–40. <https://doi.org/10.1016/J.JHE.2013.11.005>
- HUD. (2001). Housing Quality Standards. In *Housing Choice Voucher Program Guidebook*. U.S. Department of Housing and Urban Development. https://www.hud.gov/sites/documents/DOC_35620.PDF
- Ludwig, J., Duncan, G. J., Gennetian, L. A., Katz, L. F., Kessler, R. C., Kling, J. R., & Sanbonmatsu, L. (2013). Long-Term Neighborhood Effects on Low-Income Families: Evidence from Moving to Opportunity. *American Economic Review*, 103(3), 226–231. <https://doi.org/10.1257/AER.103.3.226>
- Mills, G., Gubits, D., Orr, L., Long, D., Feins, J., Kaul, B., Wood, M., & et al. (2006). *Effects of Housing Vouchers on Welfare Families*. www.huduser.org
- NMHC/NAA Joint Legislative Program. (2014). *Fair Housing: Source of Income Discrimination*.
<https://www.nmhc.org/contentassets/685fbf3170e04035a1a21547e2278910/fair-housing-source-of-income-2014-01.pdf>
- Phillips, D. C. (2017). Landlords avoid tenants who pay with vouchers. *Economics Letters*, 151, 48–52.
<https://doi.org/10.1016/J.ECONLET.2016.11.036>
- PRRAC. (2023). *Crafting a strong and effective source of income discrimination law*.
<http://www.prrac.org/pdf/crafting-a-strong-and-effective-source-of-income-discrimination-law.pdf>

- Raj Chetty, B., Hendren, N., Katz, L. F., thank Joshua Angrist, W., Kling, J., Liebman, J., Ludwig, J., Abraham, S., Bell, A., Bergeron, A., Fogel, J., Hildebrand, N., Olssen, A., & Scuderi, B. (2016). The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment. *American Economic Review*, 106(4), 855–902.
<https://doi.org/10.1257/AER.20150572>
- Rentspree. (2021, June 13). *Guide to Standard Rental Application Forms*. Rentspree Rental Housing Application Process 101. <https://www.rentspree.com/learn/rental-application/standard-rental-application-form/>
- Rice, D. (2019). *Agencies Generally Use All Available Voucher Funding to Help Families Afford Housing*. <https://www.cbpp.org/research/housing/agencies-generally-use-all-available-voucher-funding-to-help-families-afford>
- Rosen, E. (2014). Rigging the Rules of the Game: How Landlords Geographically Sort Low-Income Renters. *City and Community*, 13(4), 310–340. <https://doi.org/10.1111/CICO.12087>
- Rosen, E. (2020). The Voucher Promise. In *The Voucher Promise*. Princeton University Press.
<https://doi.org/10.2307/J.CTVVB7MNS>
- Scott, M. (2021, July 30). *A Guide to California Rental Applications*. Avail.
<https://www.avail.co/education/articles/a-guide-to-california-rental-applications>
- Sun, L., & Abraham, S. (2020). Estimating dynamic treatment effects in event studies with heterogeneous treatment effects. *Journal of Econometrics*. <https://doi.org/10.1016/J.JECONOM.2020.09.006>
- Tighe, J. R., Hatch, M. E., & Mead, J. (2017). Source of Income Discrimination and Fair Housing Policy. *Journal of Planning Literature*, 32(1), 3–15. <https://doi.org/10.1177/0885412216670603>
- U.S. Department of Justice. (2016). *Uniform Crime Reporting Handbook: Table 20*. <https://ucr.fbi.gov/crime-in-the-u.s/2016/crime-in-the-u.s.-2016/tables/table-20>
- Warren, E. (2019, March 16). *Safe and Affordable Housing*. Elizabeth Warren’s Presidential Campaign Website. <https://elizabethwarren.com/plans/safe-affordable-housing>

TABLES

Table 1: State-level source of income (SOI) policies implemented as of 2021

<i>State</i>	<i>Year of Implementation</i>	<i>Policy Covers Housing Choice Vouchers?</i>	<i>Notes</i>
Massachusetts	1971	Yes	
Maine	1975	Yes	Protections weakened by judicial ruling in 2014
Wisconsin	1980	No	
New Jersey	1981	Beginning in 2002	Existing regulations amended in 2002 to cover SOI discrimination
North Dakota	1983	Yes	
Oklahoma	1985	No	
Vermont	1987	Yes	
Connecticut	1989	Yes	
Minnesota	1990	Prior to 2010	2010 judicial ruling removed HCV as protected source of income
Utah	1989	Beginning in 1993	Amended in 1993 to cover HCVs as a protected source of income
California	2000	Beginning in 2020	Amended in 2019 to cover HCVs as a protected source of income
Washington, DC	2005	Yes	
Oregon	2014	Yes	
Delaware	2016	Yes	
Washington	2018	Yes	
New York	2019	Yes	
Maryland	2020	Yes	
Virginia	2020	Yes	
Colorado	2021	Yes	
Rhode Island	2021	Yes	

NOTES: While not listed above, the state of Texas passed legislation specifically preempting all city- and county-level source of income policies in 2015. Texas subsequently passed legislation in 2023 specifically barring homeowners' associations from using restrictive covenants to prevent homeowners from renting to housing voucher recipients. For a list of SOI policies implemented at the county and city level, see Appendix Tables 1 and 2, respectively.

Table 2: Summary statistics for county- and housing agency-level data

	Mean	SD	10 th Pct	90 th Pct
Panel 1: County-Level Renter Outcomes				
<i>1,640 Counties in Analysis Sample</i>				
Log(Months Waiting to Move into Housing)	2.7	0.9	1.5	3.7
Log(Average Length of Residence in Months)	4.1	0.4	3.6	4.6
Log(Average Rent per Month)	5.7	0.2	5.4	5.9
Fraction of Residents Categorized as Overhoused	23.0	11.0	10.0	38.0
Average Census Tract-Level Poverty Rate	18.1	7.2	9.0	28.0
Average Census Tract-Level Fraction Non-White	26.3	22.8	3.0	62.0
Average Census Tract-Level Homeownership Rate	57.6	13.5	41.0	74.0
Panel 2: Housing Agency-Level Outcomes				
<i>2,076 Housing Agencies in Analysis Sample</i>				
Total Vouchers	1,039.7	3,350.5	51.2	2,029.5
Total Vouchers Under Lease	1,030.9	3,751.9	50.7	1,993.0
Voucher Utilization Rate (%)	98.0	5.1	94.7	100.0

NOTES: Data in Panel 1 is from the Department of Housing and Urban Development’s (HUD) Picture of Subsidized Households county-level records from 2004 to 2019 and is aggregated to the county-by-year level. The analysis sample is comprised of the 1,640 counties for which non-missing records for the first two variables in Panel 1 – log months waiting and log average length of residency – were available in all years between 2004 and 2019. This sample is comprised of 26,460 county-year observations. Data in Panel 2 is from the Department of Housing and Urban Development (HUD) Voucher Management System’s public housing agency-level records from 2010 to 2019 and is aggregated to the agency-by-year level. The sample of housing agencies is restricted to the 2,076 counties for which non-missing records for each of the outcomes in Panel 2 were available in all years between 2010 and 2019; the resulting sample is comprised of 20,760 agency-by-year observations.

Table 3: *Housing voucher recipients report waiting fewer months for housing in jurisdictions that implement source of income (SOI) policies*

Outcome: Log(Months Waiting)	(1)	(2)	(3)
Source of Income Law	-0.178*** (0.044)	-0.187*** (0.042)	-0.179*** (0.043)
Observations	26,240	26,240	26,240
Mean(Outcome)	2.65	2.65	2.65
<i>Controls</i>			
Demographic Shares	.	Y	Y
Economic Controls	.	.	Y

NOTES: Outcome data is from the Department of Housing and Urban Development’s (HUD) Picture of Subsidized Households county-level records from 2004 to 2019. These records are aggregated to the county-by-year level and include 1,640 counties; see footnotes to Table 2 for a discussion of inclusion criteria. All specifications include county and year fixed effects. Demographic shares include a vector of controls for the fractions of the state population that are Black, Hispanic, and female, as well as average age, high school graduation rate, and the fraction of population that is married. Economic controls include state employment-to-population ratio, the log value of average household income, the fraction of the population with incomes below the poverty threshold, as well as SSI and SNAP reciprocity rates. All standard errors are clustered at the county level.

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table 4: Average length of residence in current housing units for voucher recipients declines in jurisdictions that implement source of income (SOI) policies

Outcome: Log(Length of Residence)	(1)	(2)	(3)
Source of Income Law	-0.044*** (0.011)	-0.041*** (0.011)	-0.033*** (0.011)
Observations	26,240	26,240	26,240
Mean(Outcome)	4.12	4.12	4.12
<i>Controls</i>			
Demographic Shares	.	Y	Y
Economic Controls	.	.	Y

NOTES: Outcome data is from the Department of Housing and Urban Development’s (HUD) Picture of Subsidized Households county-level records from 2004 to 2019. These records are aggregated to the county-by-year level and include 1,640 counties; see footnotes to Table 2 for a discussion of inclusion criteria. All specifications include county and year fixed effects. Demographic shares include a vector of controls for the fractions of the state population that are Black, Hispanic, and female, as well as average age, high school graduation rate, and the fraction of population that is married. Economic controls include state employment-to-population ratio, the log value of average household income, the fraction of the population with incomes below the poverty threshold, as well as SSI and SNAP reciprocity rates. All standard errors are clustered at the county level.

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table 5: Alternative approaches to defining SOI_{cst} results in estimated effects that do not materially differ from those reported in Tables 3 and 4

	(1)	(2)
	Log(Months Waiting)	Log(Length of Residence)
Panel 1: SOI_{cst} Weighted by City Population		
Source of Income Law	-0.187*** (0.045)	-0.039*** (0.011)
Observations	26,240	26,240
Mean(Outcome)	2.65	4.12
Panel 2: Counties Treated by Local SOI Policies Omitted from Sample		
Source of Income Law	-0.181*** (0.048)	-0.040*** (0.012)
Observations	25,552	25,552
Mean(Outcome)	2.64	4.11
<i>Controls</i>		
Demographic Shares	Y	Y
Economic Controls	Y	Y

NOTES: Outcome data is from the Department of Housing and Urban Development's (HUD) Picture of Subsidized Households county-level records from 2004 to 2019. These records are aggregated to the county-by-year level and include 1,640 counties; see footnotes to Table 2 for a discussion of inclusion criteria. All specifications include county and year fixed effects. In Panel 1, when a local jurisdiction in county c implements an SOI policy, binary treatment indicator SOI_{cst} from equation (1) is multiplied by the quotient of that city's population divided by the population of county c (see Section 3.3 for additional discussion of this approach). In Panel 2, all counties in which a local SOI policy is implemented are omitted from the sample (see Section 3.3 for additional details). Demographic shares include a vector of controls for the fractions of the state population that are Black, Hispanic, and female, as well as average age, high school graduation rate, and the fraction of population that is married. Economic controls include state employment-to-population ratio, the log value of average household income, the fraction of the population with incomes below the poverty threshold, as well as SSI and SNAP reciprocity rates. All standard errors are clustered at the county level.

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table 6: *There is little consistent evidence that source of income (SOI) policies impact the demographic characteristics of the neighborhoods in which voucher recipients reside*

	(1)	(2)	(3)
Panel 1: Tract-Level Poverty Rate			
Source of Income Law	-0.139 (0.188)	0.115 (0.194)	0.316 (0.193)
Observations	26,240	26,240	26,240
Mean(Outcome)	18.09	18.09	18.09
Panel 2: Tract-Level Percent Non-White			
Source of Income Law	0.581*** (0.208)	0.114 (0.232)	0.104 (0.245)
Observations	26,240	26,240	26,240
Mean(Outcome)	26.36	26.36	26.36
<i>Controls</i>			
Demographic Shares	.	Y	Y
Economic Controls	.	.	Y

NOTES: Outcome data is from the Department of Housing and Urban Development's (HUD) Picture of Subsidized Households county-level records from 2004 to 2019. These records are aggregated to the county-by-year level and include 1,640 counties; see footnotes to Table 2 for a discussion of inclusion criteria. All specifications include county and year fixed effects. Demographic shares include a vector of controls for the fractions of the state population that are Black, Hispanic, and female, as well as average age, high school graduation rate, and the fraction of population that is married. Economic controls include state employment-to-population ratio, the log value of average household income, the fraction of the population with incomes below the poverty threshold, as well as SSI and SNAP reciprocity rates. All standard errors are clustered at the county level.

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table 7: Source of income (SOI) policies do not affect voucher utilization rates on average

	(1)	(2)	(3)
Panel 1: Log(Total Vouchers)			
Source of Income Law	-0.000 (0.010)	-0.003 (0.010)	-0.003 (0.010)
Observations	20,760	20,760	20,760
Mean(Outcome)	5.76	5.76	5.76
Panel 2: Log(Total Vouchers Under Lease)			
Source of Income Law	-0.003 (0.009)	-0.005 (0.009)	-0.005 (0.010)
Observations	20,760	20,760	20,760
Mean(Outcome)	5.74	5.74	5.74
Panel 3: Voucher Utilization Rate (Total Vouchers Under Lease / Total Vouchers)			
Source of Income Law	-0.002 (0.002)	-0.001 (0.002)	-0.000 (0.002)
Observations	20,760	20,760	20,760
Mean(Outcome)	0.98	0.98	0.98
<i>Controls</i>			
Demographic Shares	.	Y	Y
Economic Controls	.	.	Y

NOTES: Outcome data is from the Department of Housing and Urban Development (HUD) Voucher Management System's public housing agency-level records from 2010 to 2019. These records are aggregated to the agency-by-year level and include 2,076 agencies. All specifications include housing-agency and year fixed effects. Demographic shares include a vector of controls for the fractions of the state population that are Black, Hispanic, and female, as well as average age, high school graduation rate, and the fraction of population that is married. Economic controls include state employment-to-population ratio, the log value of average household income, fraction of the population with incomes below the poverty threshold, as well as SSI and SNAP reciprocity rates. All standard errors are clustered at the housing-agency level.

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table 8: *There is suggestive evidence that source of income (SOI) policies may improve voucher utilization rates for housing agencies with below-median utilization rates prior to policy implementation*

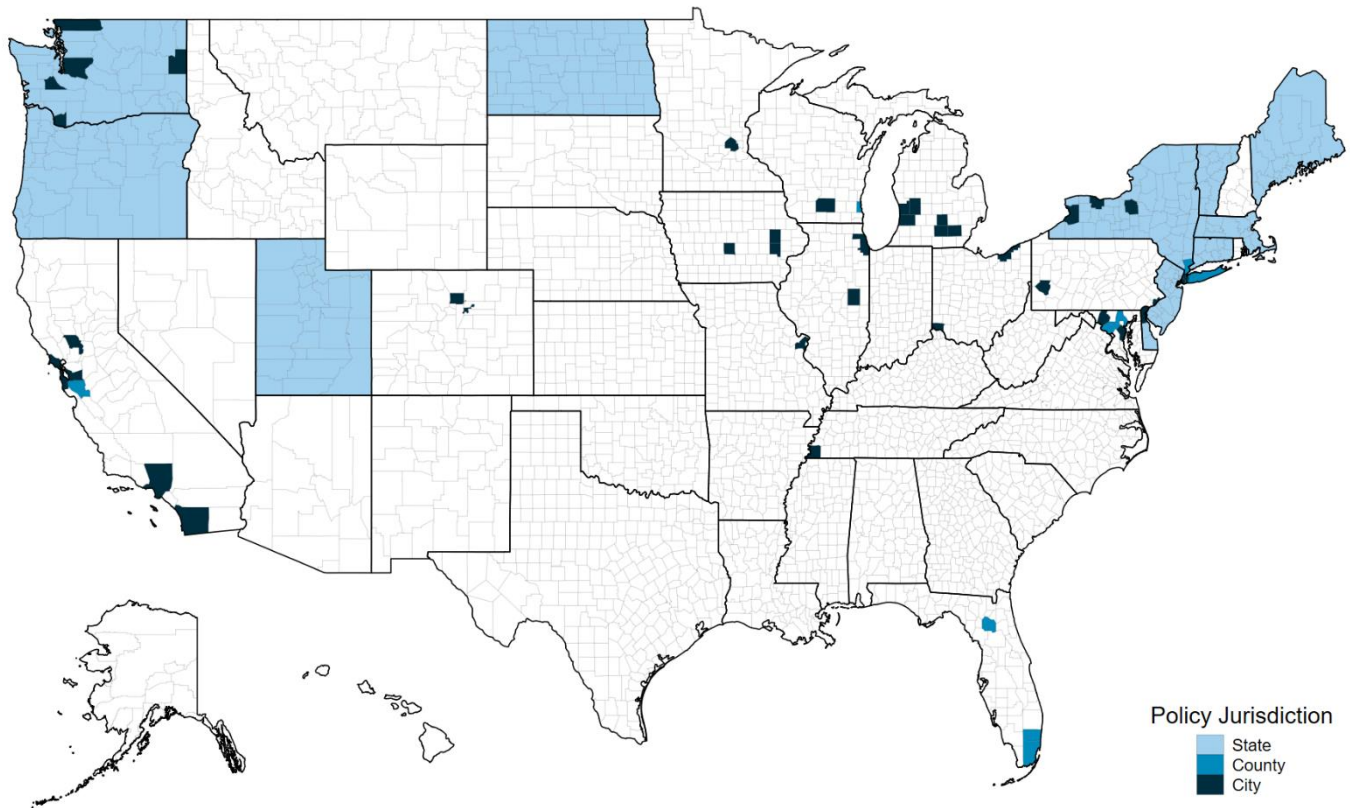
	(1)	(2)	(3)
Panel 1: Log(Total Vouchers)			
Source of Income Law	0.011 (0.016)	0.007 (0.016)	0.004 (0.017)
Observations	8,620	8,620	8,620
Mean(Outcome)	5.78	5.78	5.78
Panel 2: Log(Total Vouchers Under Lease)			
Source of Income Law	0.018 (0.015)	0.014 (0.015)	0.014 (0.016)
Observations	8,620	8,620	8,620
Mean(Outcome)	5.74	5.74	5.74
Panel 3: Voucher Utilization Rate (Total Vouchers Under Lease / Total Vouchers)			
Source of Income Law	0.005 (0.003)	0.005* (0.003)	0.006* (0.004)
Observations	8,620	8,620	8,620
Mean(Outcome)	0.97	0.97	0.97
<i>Controls</i>			
Demographic Shares	.	Y	Y
Economic Controls	.	.	Y

NOTES: Outcome data is from the Department of Housing and Urban Development (HUD) Voucher Management System's public housing agency-level records from 2010 to 2019. These records are aggregated to the agency-by-year level and include 2,076 agencies. All specifications include housing-agency and year fixed effects. Demographic shares include a vector of controls for the fractions of the state population that are Black, Hispanic, and female, as well as average age, high school graduation rate, and the fraction of population that is married. Economic controls include state employment-to-population ratio, the log value of average household income, fraction of the population with incomes below the poverty threshold, as well as SSI and SNAP reciprocity rates. All standard errors are clustered at the housing-agency level.

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

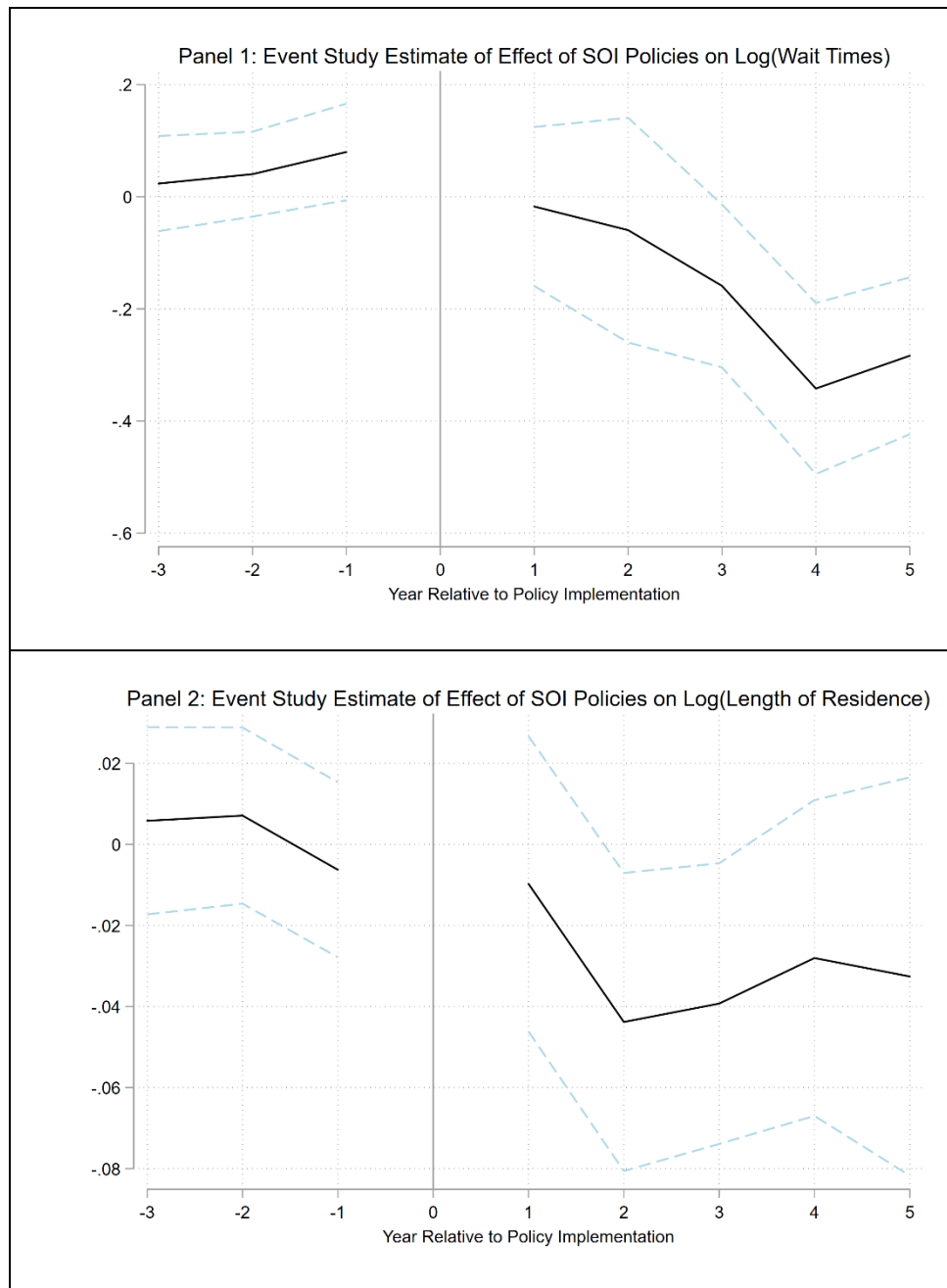
FIGURES

Figure 1: SOI policies implemented as of December 2019



NOTE: All source of income (SOI) policies covering housing choice vouchers in effect as of the end of 2019 are plotted above. Policies are plotted across counties; “Policy Jurisdiction” denotes whether the first SOI policy affecting a given county was implemented at the state, county, or city level. Cities which implement SOI policies are matched to all counties which intersect with that city’s boundaries and each intersecting county is counted as having an SOI policy. State policy implementation and effective dates are reported in Table 1; lists of county and city SOI policies with implementation dates are provided in Appendix Tables 1 and 2, respectively.

Figure 2: *Balanced-panel robust event studies for key county-level outcomes from Tables 3 and 4*



NOTES: Outcome data is from the Department of Housing and Urban Development’s (HUD) Picture of Subsidized Households county-level records from 2004 to 2019. These records are aggregated to the county-by-year level and include 1,640 counties; see footnotes to Table 2 for a discussion of inclusion criteria. Event study estimates are calculated using the imputation-based estimator from Borusyak et al. (2021); SOI policies implemented between 2007 and 2014 identify the event-time indicators above. All specifications include county and year fixed effects; standard errors are clustered at the county level. Dashed lines denote 95 percent confidence intervals. Exact coefficients as well as the p-value from a test of the joint significance of the pre-treatment event time coefficients are reported in Appendix Table 3.

Figure 3: Robust event study for the impact of SOI policies on the voucher utilization rates of lower utilization rate agencies



NOTES: Outcome data is from the Department of Housing and Urban Development (HUD) Voucher Management System’s public housing agency-level records from 2010 to 2019. These records are aggregated to the agency-by-year level and include 2,076 public housing agencies. The sample is restricted to housing agencies with average utilization rates that are below the median utilization rate for all agencies across the sample period. Average utilization rates for counties treated by SOI policies are calculated in the pre-treatment period. Event study estimates are calculated using the imputation-based estimator from Borusyak et al. (2021); SOI policies implemented between 2013 and 2016 identify the event-time indicators above. All specifications include county and year fixed effects; standard errors are clustered at the housing-agency level. Dashed lines denote 95 percent confidence intervals. Exact coefficients as well as the p-value from a test of the joint significance of the pre-treatment event time coefficients are reported in Appendix Table 6.

APPENDIX

Appendix Table 1: County-level source of income (SOI) policies covering housing choice vouchers implemented as of 2019

<i>Jurisdiction</i>	<i>State</i>	<i>Year of Implementation</i>
Dane County	Wisconsin	1988
Montgomery County	Maryland	1991
Howard County	Maryland	1992
King County*	Washington	2006
Nassau County	New York	2007
Miami-Dade County	Florida	2009
Frederick County	Maryland	2009
Cook County	Illinois	2013
Westchester County	New York	2013
Suffolk County	New York	2015
Marin County	California	2017
Santa Clara County*	California	2017
Broward County	Florida	2017
Milwaukee County	Wisconsin	2018
Erie County	New York	2018
Los Angeles County*	California	2019
Alachua County	Florida	2019
Anne Arundel County	Maryland	2019
Baltimore County	Maryland	2019

NOTES: For a list of SOI policies implemented at the city level, see Appendix Table 2.

* These policies specifically cover unincorporated areas of their respective counties.

Appendix Table 2: City-level source of income (SOI) policies covering housing choice vouchers implemented as of 2019

<i>State</i>	<i>Jurisdictions</i>
California	Alameda (2019), Berkeley (2017), Corte Madera (2000), East Palo Alto (2000), Fairfax (2018), Mill Valley (2005), Milpitas (2019), Novato (2018), San Anselmo (2019), San Diego (2018), San Francisco (1998), San Jose (2019), San Rafael (2018), Santa Monica (2015), and Woodland (2018)
Colorado	Boulder (2018) and Denver (2019)
Delaware	Wilmington (1998)
Illinois	Chicago (1990), Harwood Heights (2009), and Urbana (1996)
Iowa	Des Moines (2019)*, Iowa City (2015)*, and Marion (2000)*
Maryland	Annapolis (2009), Baltimore (2019), and Frederick (2002)
Massachusetts	Boston (1980), Cambridge (1992), Quincy (1992), and Revere (1994)
Michigan	Ann Arbor (1978), East Lansing (2002), Grand Rapids (2000), Holland (2002), Jackson (2018), Kentwood (2018), Lansing (1986), and Wyoming (2018)
Minnesota	Minneapolis (2018)
Missouri	Clayton (2019), St. Louis (2015), and Webster Groves (2019)
New York	Buffalo (2006), Hamburg (2005), New York City (2008), Rochester (2017), Syracuse (2016), and West Seneca (1979)
Ohio	Cincinnati (1980), Linndale (2012), South Euclid (2015), University Heights (2012), Warrensville Heights (2012), and Wickliffe (2009)
Pennsylvania	Borough of State College (1993), Philadelphia (1980), and Pittsburgh (2015)*
Texas	Austin (2015)*, and Dallas (2016)*
Tennessee	Memphis (2002)
Washington	Bellevue (1990), Bellingham (2018), Kent (2017), Kirkland (2013), Olympia (1980), Redmond (2012), Renton (2016), Seattle (1989), Spokane (2017), and Vancouver (2015)
Wisconsin	Madison (1977)

NOTES: Year of implementation is listed in parentheses for each city. The cities of Austin, TX (2015) and Dallas, TX (2016) also implemented local SOI policies; however, the state of Texas has passed legislation in 2015 specifically preempting these policies and thus they are not included as treated jurisdictions in the results below. In 2021, the state of Iowa passed legislation preempting the local policies listed above; this legislation becomes effective at the beginning of 2023. Naperville, IL issued initial source of income legislation in 2000, but did not specifically include housing choice vouchers; this policy was amended in 2020 to include vouchers as a protected source of income. Pittsburgh’s SOI policy was nullified by a 2021 judicial ruling.

Appendix Table 3: Robust imputation-based event study estimates from Figure 2

	Log(Months Waiting)	Log(Length of Residence)
Panel 1: ATT Estimate of δ from Robust Estimation of Equation (1)		
Source of Income Law	-0.121*** (0.037)	-0.025* (0.013)
Observations	23,648	23,648
Mean(Outcome)	2.64	4.11
Panel 2: Robust Event-Study Estimates		
3 years pre-policy	0.024 (0.043)	0.006 (0.012)
2 years pre-policy	0.040 (0.039)	0.007 (0.011)
1 year pre-policy	0.080* (0.044)	-0.006 (0.011)
1 year post-policy	-0.017 (0.072)	-0.010 (0.019)
2 years post-policy	-0.060 (0.102)	-0.044** (0.019)
3 years post-policy	-0.159** (0.074)	-0.039** (0.018)
4 years post-policy	-0.342*** (0.078)	-0.028 (0.020)
5 years post-policy	-0.284*** (0.071)	-0.033 (0.025)
P-Value from Test of Pre-Policy Joint Significance	0.35	0.73
Observations	23,398	23,459
Mean(Outcome)	2.63	4.11

NOTES: Outcome data is from the Department of Housing and Urban Development's (HUD) Picture of Subsidized Households county-level records from 2004 to 2019. These records are aggregated to the county-by-year level and include 1,640 counties; see footnotes to Table 2 for a discussion of inclusion criteria. All specifications include county and year fixed effects. Estimates reported above are calculated using the imputation-based estimator from Borusyak et al. (2021). In Panel 2, the sample of counties identifying post-treatment coefficients has been restricted to only those counties with sufficient data available post-policy implementation to identify all five years of coefficients; these coefficients are identified by SOI policies implemented between 2007 and 2014. All standard errors are clustered at the county level.

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Appendix Table 4: The estimated reduction in average wait times prior to move-in for voucher holders is robust to the inclusion of controls for county-level unemployment rates and state-by-year fixed effects

	(1)	(2)
Panel 1: Log(Months Waiting)		
Source of Income Law	-0.188*** (0.043)	-0.149** (0.071)
Observations	26,176	26,176
Mean(Outcome)	2.65	2.65
Panel 2: Log(Length of Residence)		
Source of Income Law	-0.034*** (0.011)	0.021 (0.021)
Observations	26,176	26,176
Mean(Outcome)	4.12	4.12
<i>Controls</i>		
LAU County-Level Unemployment Rate	Y	Y
State-Level Time-Varying Controls	Y	.
State-by-Year Fixed Effects	.	Y

NOTES: Outcome data is from the Department of Housing and Urban Development’s (HUD) Picture of Subsidized Households county-level records from 2010 to 2019. Sample sizes differ from the corresponding results presented in Tables 3 through 5 because LAU data is not available for all county-year observations in sample. All specifications include county and year fixed effects. Demographic shares include a vector of state-level controls for the fractions of the state population that are Black, Hispanic, and female, as well as average age, high school graduation rate, and the fraction of population that is married. Economic controls include state employment-to-population ratio, the log value of average household income, the fraction of the population with incomes below the poverty threshold, as well as SSI and SNAP reciprocity rates. All standard errors are clustered at the county level.

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Appendix Table 5: Removing the complete-sample restriction imposed on the county-level regression sample does not materially change estimated effects from Tables 3 and 4

	(1)	(2)	(3)
Panel 1: Log(Months Waiting)			
Source of Income Law	-0.189*** (0.040)	-0.203*** (0.039)	-0.187*** (0.040)
Observations	37,403	37,403	37,403
Mean(Outcome)	2.60	2.60	2.60
Panel 2: Log(Length of Residence)			
Source of Income Law	-0.052*** (0.012)	-0.061*** (0.014)	-0.058*** (0.015)
Observations	37,403	37,403	37,403
Mean(Outcome)	4.10	4.10	4.10
<i>Controls</i>			
Demographic Shares	.	Y	Y
Economic Controls	.	.	Y

NOTES: Outcome data is from the Department of Housing and Urban Development's (HUD) Picture of Subsidized Households county-level records from 2004 to 2019. In contrast to the main results presented in Tables 3 through 6, here there is no balanced or complete-sample restriction; for more discussion of this restriction, see Notes to Table 2. The sample of counties above is the set of all county-year observations that report non-missing values for the outcome listed in each panel title. All specifications include county and year fixed effects. Demographic shares include a vector of controls for the fractions of the state population that are Black, Hispanic, and female, as well as average age, high school graduation rate, and the fraction of population that is married. Economic controls include state employment-to-population ratio, the log value of average household income, the fraction of the population with incomes below the poverty threshold, as well as SSI and SNAP reciprocity rates. All standard errors are clustered at the county level.

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Appendix Table 6: Robust imputation-based event study estimates from Figure 3

	Voucher Utilization Rate
Panel 1: ATT Estimate of δ from Robust Estimation of Equation (2)	
Source of Income Law	0.002 (0.003)
Observations	8,180
Mean(Outcome)	0.97
Panel 2: Robust Event-Study Estimates	
3 years pre-policy	0.010 (0.006)
2 years pre-policy	-0.007 (0.007)
1 year pre-policy	0.003 (0.006)
1 year post-policy	-0.006 (0.005)
2 years post-policy	-0.010 (0.010)
3 years post-policy	-0.011 (0.008)
4 years post-policy	0.010 (0.006)
5 years post-policy	-0.007 (0.007)
P-Value from Test of Pre-Policy Joint Significance	0.37
Observations	7,986
Mean(Outcome)	0.96

NOTES: Outcome data is from the Department of Housing and Urban Development (HUD) Voucher Management System’s public housing agency-level records from 2010 to 2019. These records are aggregated to the agency-by-year level and include 2,076 public housing agencies. All specifications include county and year fixed effects. The sample is restricted to housing agencies with average utilization rates that are below the median utilization rate for all agencies across the sample period. Average utilization rates for counties treated by SOI policies are calculated in the pre-treatment period. Estimates reported above are calculated using the imputation-based estimator from Borusyak et al. (2021). In Panel 2, the sample of counties identifying post-treatment coefficients has been restricted to only those counties with sufficient data available post-policy implementation to identify all five years of coefficients; these coefficients are identified by SOI policies implemented between 2013 and 2016. All standard errors are clustered at the agency level.

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Appendix Table 7: Alternative specification of SOI_{hst} for lower utilization rate agencies again provides suggestive evidence of an increase in voucher utilization for agencies with below-median voucher utilization rates

	(1)	(2)	(3)
Panel 1: Log(Total Vouchers)			
Source of Income Law	0.005 (0.015)	0.001 (0.015)	-0.001 (0.015)
Observations	8,700	8,700	8,700
Mean(Outcome)	5.78	5.78	5.78
Panel 2: Log(Total Vouchers Under Lease)			
Source of Income Law	0.012 (0.014)	0.009 (0.014)	0.009 (0.014)
Observations	8,700	8,700	8,700
Mean(Outcome)	5.75	5.75	5.75
Panel 3: Voucher Utilization Rates (Total Vouchers Under Lease / Total Vouchers)			
Source of Income Law	0.005* (0.003)	0.005* (0.003)	0.007* (0.004)
Observations	8,700	8,700	8,700
Mean(Outcome)	0.97	0.97	0.97
<i>Controls</i>			
Demographic Shares	.	Y	Y
Economic Controls	.	.	Y

NOTES: Outcome data is from the Department of Housing and Urban Development (HUD) Voucher Management System's public housing agency-level records from 2010 to 2019. These records are aggregated to the agency-by-year level and include 2,076 agencies. All specifications include housing-agency and year fixed effects. The sample is restricted to housing agencies with average utilization rates that are below the median utilization rate for all agencies across the sample period. Average utilization rates for counties treated by SOI policies are calculated in the pre-treatment period. Demographic shares include a vector of controls for the fractions of the state population that are Black, Hispanic, and female, as well as average age, high school graduation rate, and the fraction of population that is married. Economic controls include state employment-to-population ratio, the log value of average household income, the fraction of the population with incomes below the poverty threshold, as well as SSI and SNAP reciprocity rates. All standard errors are clustered at the housing-agency level.

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

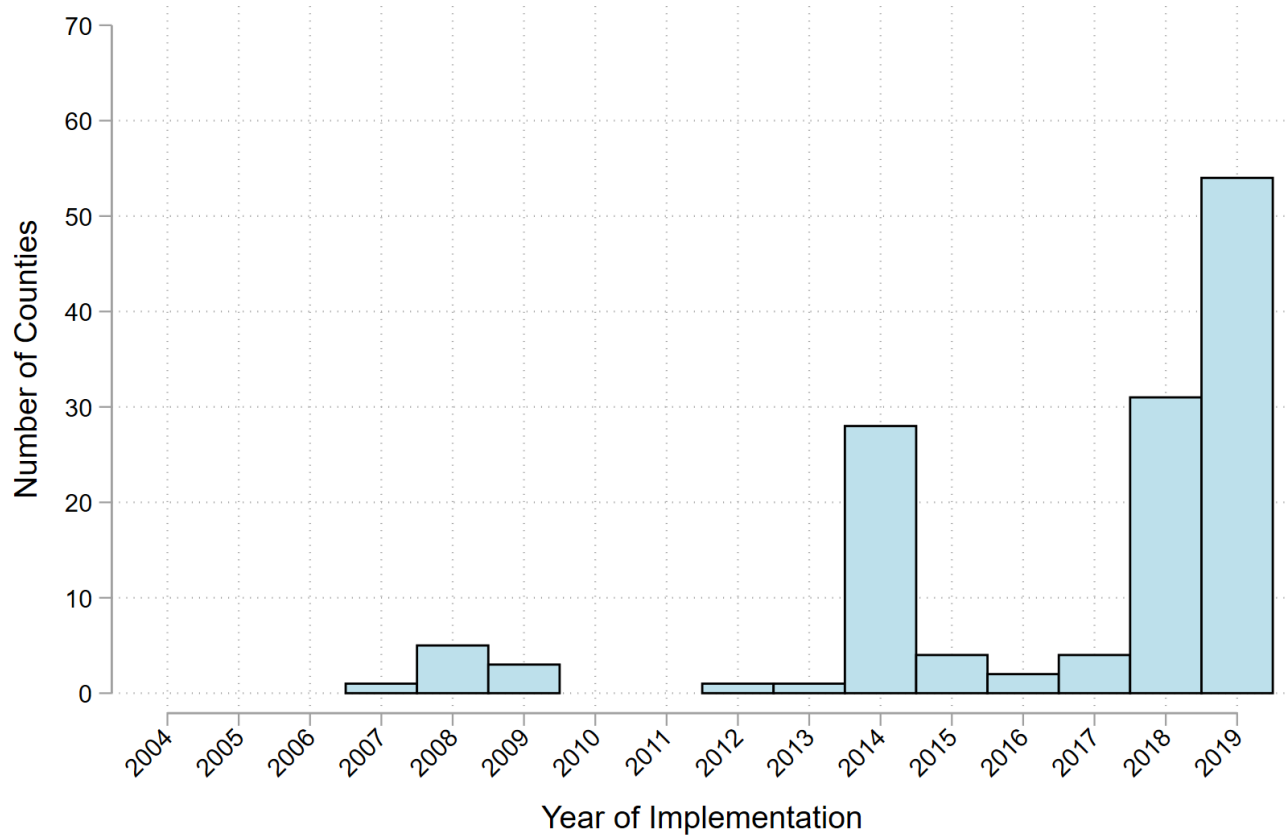
Appendix Table 8: Estimated effect of SOI policies on voucher utilization rates for below-median utilization rate housing agencies with the inclusion of state-year fixed effects

Voucher Utilization Rates	
Panel 1: Baseline Definition of SOI_{hst} from Equation (2)	
Source of Income Law	0.007 (0.006)
Observations	8,600
Mean(Outcome)	0.97
Panel 2: Alternative Definition of SOI_{hst} from Appendix Table 7	
Source of Income Law	0.006 (0.006)
Observations	8,600
Mean(Outcome)	0.97

NOTES: Outcome data is from the Department of Housing and Urban Development (HUD) Voucher Management System's public housing agency-level records from 2010 to 2019. These records are aggregated to the agency-by-year level and include 2,076 public housing agencies. In Panel 2, the sample is restricted to housing agencies with average utilization rates that are below the median utilization rate for all agencies across the sample period. Average utilization rates for counties treated by SOI policies are calculated in the pre-treatment period. Each specification includes county, year, and state-by-year fixed effects; state-level, time-varying controls are omitted because they are collinear with state-by-year fixed effects. All standard errors are clustered at the housing-agency level.

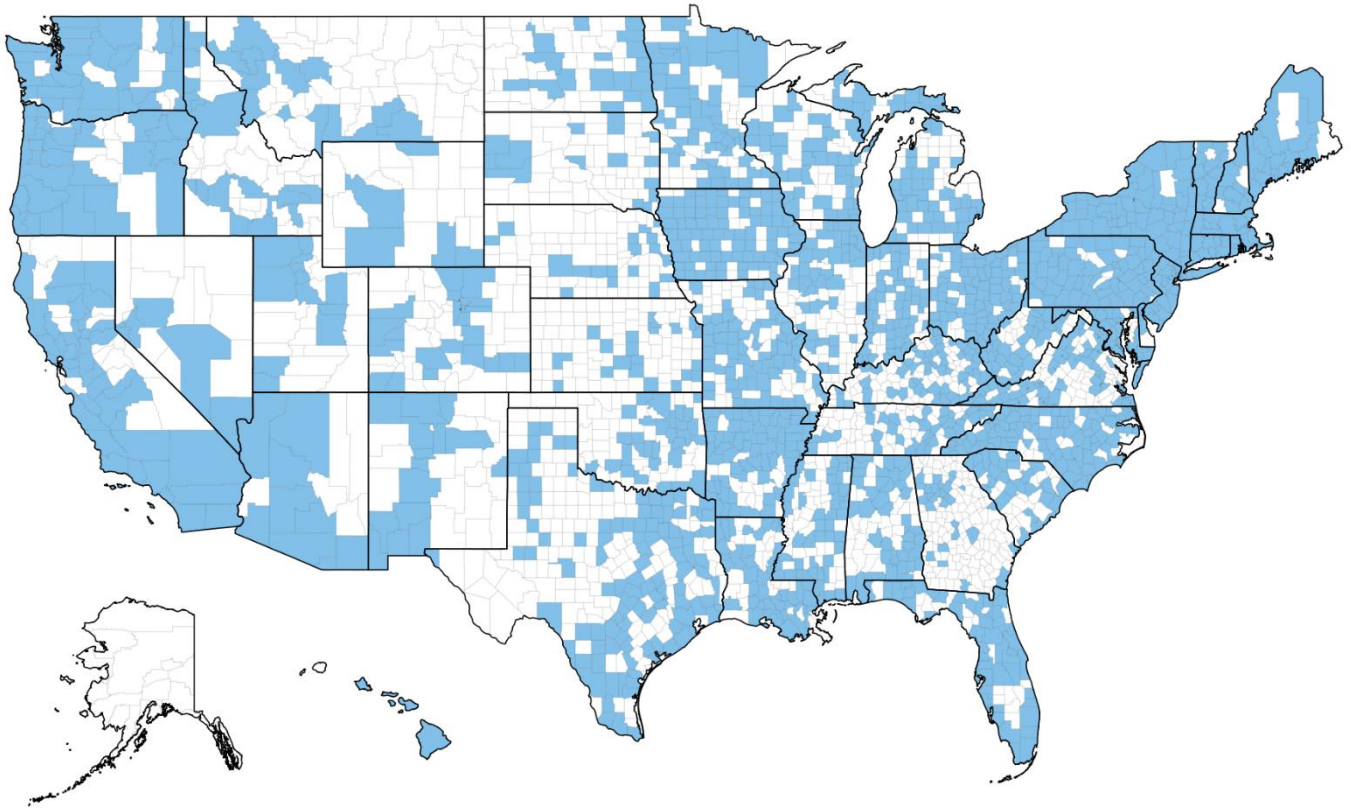
* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Appendix Figure 1: Implementation of SOI policies over time across counties evaluated in complete sample



NOTE: This graph reports the number of counties in which an SOI policy specifically covering housing choice vouchers was implemented each year between 2004 and 2019. The reported counts correspond to the number of counties newly treated by such policies in a given year (e.g., in 2014, 28 counties were treated by SOI policies as a result of the implementation of a state, county, and local policy). See Table 1 and Appendix Tables 1 and 2 for a list of states, counties, and cities respectively that have implemented SOI policies during this time period, in addition to year of implementation. The sample of counties is restricted to the 1,640 counties that comprise the analysis sample for the county-level results presented in Tables 3 through 6; for a description of sample-inclusion criteria, see Notes to Table 2 above.

Appendix Figure 2: Counties contributing to complete sample



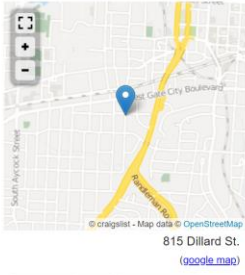

NOTE: The 1,640 counties that comprise the analysis sample for the county-level results presented in Tables 3 through 6 are shaded in blue. Data from 2004 and 2019; for a description of sample-inclusion criteria, see Notes to Table 2 above.

APPENDIX MATERIALS

A1: Sample Rental Housing Listings specifically stating that landlord will not rent to applicants with housing choice vouchers

\$925 / 3br - 986ft² - COMING SOON! 3 BED/1 BATH HOME! (Greensboro, NC)

image 1 of 16



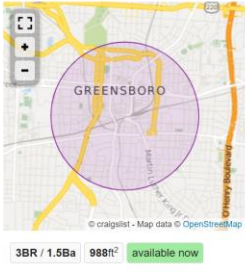

3BR / 1Ba 986ft² available oct 8

air conditioning
application fee details: \$50.00 18 and older.
NO SECTION 8 OR AGRESIVE BREEDS
cats are OK - purrr
dogs are OK - woof
house
wid in unit
no smoking
off-street parking

Super cute 3bed/1bath home in Glenwood! Laminate hardwood floors throughout living area and kitchen! Updated kitchen, appliances and cabinets! Spacious bedrooms! Close to everything...UNCG, 29/40/85, downtown, and coliseum. A must see!! Washer/Dryer Included. Gas Heat, Central Air. Pets CBC No aggressive breeds.
No Section 8
View Qualifications at RENTrc.com- RESIDENT BENEFIT PACKAGE- An additional \$27 Monthly Fee will be assessed monthly. For detailed information visit:
<https://www.rentrc.com/uploads/screeningcriteriaanddisclosure.pdf>

\$850 / 3br - 988ft² - Nice 3Bd 1.5Ba Home! (Greensboro)

image 1 of 10



3BR / 1.5Ba 988ft² available now

friday 2021-08-27

application fee details: \$15

flooring: wood
house
wid hookups
attached garage
rent period: monthly

Super cute renovated 3 bed, 1.5 bath ranch! Located within walking distance to UNCG, GSO College and downtown. Features white cabinets in kitchen and bath, updated laminate wood flooring! Washer/dryer connections and off street parking. Electric Heat, window unit AC. Tenant pays all utilities. **No Section 8**. Pets allowed with \$250 non-refundable pet fee

NOTE: Screenshots taken from Craigslist rental housing listings in Greensboro, North Carolina during Fall, 2021 as examples of source of income (SOI) descriptions in practice. In both listings, the landlords specifically state that rental offers will not be extended to applicants who plan to use housing choice vouchers (referred to here as “Section 8”). SOI policies prohibit landlords from making such statements in rental housing listings and from categorically rejecting applications from voucher holders.