

# Can Rapid Rental Assistance Avert Evictions?

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## Abstract

Many communities in the U.S. have programs that make financial assistance available to families with low income who are struggling to pay rent. In this paper, we examine the average and distributional impacts of reducing wait times for emergency housing assistance on evictions. Taking advantage of administrative data from Franklin County, Ohio and exploiting exogenous changes in application processing times in two complementary empirical approaches, we find that for applicants without a pre-existing eviction case against them, each additional week of delay in receiving assistance increases the probability of an eviction filing by 31-47%. The effects materialize within two weeks of application and are stronger for applicants who are younger and who have the lowest incomes. Meanwhile, we find suggestive evidence that exogenous delays in rental assistance receipt increase the probability of eviction judgements against applicants with pre-existing filings, and no impacts of longer wait times on outcomes for individuals whose applications for rental assistance are ultimately denied. Our results have important implications for the design and implementation of emergency rental assistance programs. More broadly, our findings speak to the downstream impacts of passive compliance costs in social safety net programs.

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**JEL:** H7, I3, R2

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# 1 Introduction

Housing insecurity is a large and growing concern in the U.S. Nationwide, over half of renter households now spend more than 30% of their incomes on rent and utilities, and one in eight currently report being behind on rent.<sup>1</sup> Moreover, 31% of adults in households not current on their rent or mortgage believe eviction or foreclosure is very or somewhat likely in the next two months.<sup>2</sup> Not only can evictions lead to homelessness, but they can also negatively impact people’s income, access to credit, and health (Desmond, 2012; Hatch and Yun, 2021; Collinson et al., 2023; Ramphal et al., 2023; Graetz et al., 2024).

Many communities in the U.S. have programs that make financial assistance available to families with low incomes that face housing instability. Congress expanded this form of aid during the Covid-19 pandemic as part of the Coronavirus Aid, Relief, and Economic Security Act in 2020 and the American Rescue Plan Act in 2021. A growing body of evidence suggests that emergency rental assistance programs can be effective in reducing evictions and homelessness, but also face challenges with respect to targeting and timing (Aiken et al., 2022; Boshart, Champion and Popkin, 2022; Dutz et al., 2024).

In this paper, we examine the average and distributional effects of reducing administrative delays in providing emergency rental assistance in a program that pre-dates the pandemic and that continues in the present. Our context is Franklin County, Ohio, which is the location of Columbus. Franklin County’s Prevention, Retention, and Contingency (PRC) program provides non-recurring, short-term benefits aimed at resolving an emergent need, primarily overdue rent or utility bills, for families with low incomes. Our primary empirical strategy exploits exogenous changes in PRC application processing times stemming from disruptions caused by a state-mandated changeover in Franklin County’s case management system in mid-2018. The changeover sharply increased average processing times for PRC applications,

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<sup>1</sup>Authors’ calculations based on 2023 ACS 1-year estimates.

<sup>2</sup>Authors’ calculations based on 2024 Census Pulse Survey estimates. In Ohio, the location of our study, 52% of adults in households not current on their rent or mortgage believe eviction or foreclosure is very or somewhat likely in the next two months.

but did not affect the volume or composition of applications the county received. This episode facilitates a difference-in-differences and event study strategy in which we compare changes in evictions in months before and after the system conversion in 2018 to changes over the same timeframe in other years. In a supplementary empirical approach, we take advantage of naturally occurring variation in processing times over the full sample period, but that was amplified by the 2018 system conversion, as part of a leave-one-out instrumental variable strategy. Specifically, we use average application processing times for those who applied around the same time as an individual as an instrument for that individual’s own processing time. For each empirical approach, we leverage rich administrative data from 2017–2019 from the Franklin County Department of Job and Family Services linked to detailed housing court records.

We find consistent evidence that each additional week of delay in receiving emergency financial assistance increases the probability of an eviction filing by 31-47% among applicants without an outstanding eviction case against them. The effects materialize within two weeks of applying to the PRC program and are stronger for applicants who have the lowest incomes and who are younger. Meanwhile, we find suggestive evidence that exogenous delays in rental assistance receipt increase the probability of eviction judgements against applicants with pre-existing filings. Also, as expected, we find no impacts of longer wait times on outcomes for individuals whose applications for PRC assistance are ultimately denied. The consistency in results across empirical strategies that exploit different sources of variation and rely on different identification assumptions bolsters the credibility of the estimates.

Our findings contribute to the growing literature on eviction and homelessness prevention programs. Recent quasi-experimental and experimental work suggests that temporary financial assistance can reduce the incidence of homelessness (Rolston, Geyer and Locke, 2013; Evans, Sullivan and Wallskog, 2016; Phillips and Sullivan, 2023).<sup>3</sup> However, these

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<sup>3</sup>Recent work on pandemic-era programs suggests more limited effects of emergency assistance on financial or housing stability, which might be attributable to different macroeconomic conditions (Collinson et al., 2024).

programs have faced challenges with targeting and timing. Many people who request but do not receive homelessness prevention services do not ultimately become homeless (Shinn et al., 2013; Greer et al., 2016; Von Wachter et al., 2019; Evans, Phillips and Ruffini, 2021; Aiken et al., 2022; Dutz et al., 2024). Additionally, there are concerns and some limited evidence suggesting that application procedures and processing times might limit the benefits of temporary assistance (Aiken, Ellen and Reina, 2023; Phillips and Sullivan, 2022). Our findings speak to the overall and distributional implications of longer vs. shorter wait times for emergency rental assistance in terms of eviction outcomes.

Our results also relate to a larger literature on administrative burdens and targeting efficiency. Means-tested programs often feature administrative burdens, such as visits to offices, interviews with caseworkers, substantial paperwork and documentation requirements, and long application processing times, to verify that applicants meet eligibility requirements (Herd et al., 2013; Moynihan, Herd and Ribgy, 2016; Herd and Moynihan, 2019; Heinrich et al., 2022; Aiken, Ellen and Reina, 2023). Administrative burdens might act as an ordeal mechanism to screen out individuals that do not need program benefits, but could alternatively work to the detriment of those who most need assistance (Deshpande and Li, 2019; Foote, Grosz and Rennane, 2019; Christensen et al., 2020; Bell et al., 2023; Herd et al., 2023). Recent literature suggests reductions in “passive” compliance costs, or costs incurred when an applicant must wait for the service provider to take the next action, can benefit applicants to means-tested programs, but come with costs to the administering agency (Pierce and Moulton, 2023).

## 2 Background

Created in the immediate aftermath of U.S. welfare reform in 1996, the Prevention, Retention, and Contingency (PRC) program is a collection of initiatives funded with Temporary

Assistance for Needy Families (TANF) dollars.<sup>4</sup> Each county in Ohio has its own PRC program, and while different counties use their PRC dollars in different ways, the program as a whole is aimed at helping families with low-income move out of poverty and become self-sufficient.

Our focus is on Franklin County, the location of Columbus. Franklin County is the largest county in Ohio with a population of over 1.3 million in 2022. Franklin County’s PRC program, which is overseen by the Franklin County Department of Job and Family Services (FCDJFS), features short-term, non-recurring, crisis-oriented benefits.<sup>5</sup> During the late 2010s, the PRC had a budget of \$2.1-\$2.25 million per year.<sup>6</sup>

The benefits an individual receives from PRC can cover basic needs such as shelter, utilities, auto repairs, and employment-related expenses to resolve a specific emergent need. In practice, about 80% of all PRC requests fall into FCDJFS’s “housing assistance” category, which are for expenses related to shelter and utilities.<sup>7</sup> Many applicants seek funds to cover back rent owed to their landlords. Our sample period spans 2017 to 2019; the maximum request was \$1,000 through October 2017, then increased to \$1,500 thereafter.<sup>8</sup> Payments are limited to the amount requested to meet the emergent need, or four months worth of expenses/liabilities.

During our sample period, an individual or family is eligible for PRC short-term assistance if (a) they are at least 18 years old, (b) they reside in Franklin County, (c) their family includes at least one minor child (under 18) and/or a 6+ month pregnant woman, (d) their family has income below 165% of the federal poverty line, (e) they have not received PRC

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<sup>4</sup>PRC was established in Ohio in 1997 with Am. Sub HB 408. The name is in reference to the program’s efforts to (1) provide short-term benefits in an effort to *prevent* reliance upon and divert families from other assistance programs; (2) assist individual and families *retain* employment and maintain self-sufficiency; and (3) address a *contingent* or emergent need that might otherwise threaten the safety, health, or well-being of one or more family members and otherwise result in the need of long-term public assistance.

<sup>5</sup>Franklin County’s PRC also includes natural disaster-related assistance, but this is not our focus.

<sup>6</sup>The budget was increased following the pandemic, and was \$3.5 million in fiscal year 2024.

<sup>7</sup>On average during our sample period, there were approximately 80 applications for housing assistance each week. While homeowners with past due mortgage are eligible to apply for PRC, in practice renters represent the vast majority who apply for housing assistance under the program.

<sup>8</sup>After our sample period, the maximum request was increased to its current level of \$2,500. According to the 2018 1-Year American Community Survey, median gross monthly rent in Franklin County was \$965.

one-time assistance in the prior 12 months, and (f) they demonstrate and verify need and FCDJFS determines that provision of PRC will satisfy that need.<sup>9</sup> The final condition effectively screens out families dealing with protracted financial problems or facing deeper poverty, who are typically referred to other safety net programs.

In the late 2010s, individuals seeking PRC assistance were required to complete a one-page application and submit it to FCDJFS in person, by mail, or by fax.<sup>10</sup> Upon receipt, the FCDJFS case manager would send the applicant an application verification checklist. The applicant would then have ten days to provide the requested verifications (e.g., documentation of residence, dependents, income, and need). If required documentation was not provided, the applicant could get extensions. If documentation was not received within 30 days, however, the application would be denied. If the necessary documentation was provided, the case manager would process the full application and award benefits if the applicant met all eligibility requirements. If documentation was provided but the applicant did not meet eligibility criteria, the case manager would deny the application.

FCDJFS aims to have decisions as quickly as possible. During our sample period, FCDJFS had a 15 business day “standard of promptness” for PRC applications, but noted in its PRC plan that “in some instances, this time frame will not be met due to unavoidable delays on the part of the applicant or the agency.”<sup>11</sup> Average times to decisions fluctuate to some extent due to normal staff turnover, staff training, and fluctuating PRC application volumes.

However, beginning in July 2018, there were sharp increases in average times to decisions. These increases were driven by a state-mandated changeover from an antiquated case management system called the Client Registry Information System-Enhanced (CRISE) to a new system called OhioBenefits. While PRC applications could be handled in CRISE, they unexpectedly could not be handled in OhioBenefits. Therefore, FCDJFS had to scramble

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<sup>9</sup>The income threshold for qualification was later increased to 175% of the FPL.

<sup>10</sup>Only after the pandemic began in 2020 did PRC introduce an email option for submitting PRC applications.

<sup>11</sup>See FCDJFS PRC Plans 2016-2017 through 2018-2019.

to develop a new system for processing PRC applications, which took a number of months to iron out. At the same time, the conversion to OhioBenefits required all case managers to undergo intensive training, which decreased staff time available for processing PRC applications.

Panel (a) of Figure 1 illustrates the impacts of these events. The figure shows the average time to decision for applications submitted each week between January 2018 and December 2018. The mean time to decision for all applicants roughly doubled between the second and third quarter of 2018, from around 20 days to over 40 days. As panels (b) and (c) of Figure 1 show, there were no such changes in wait times in the second halves of 2017 or 2019, suggesting that the changes in 2018 were not driven by seasonal factors potentially correlated with the types or volumes of PRC applications received.<sup>12</sup> These delays began to fade at the end of 2018, with the mean as well as the variance in wait times declining gradually into 2019.

As we also show more formally later, the volume and composition of applications did not change markedly during our sample period, including around the time of the case management system changeover. Panel (a) of Figure 2 shows the number of applications for PRC housing assistance by week. Panel (b) of the same figure shows the average age of applicants by week, and panel (c) shows the fraction of applicants with income below 100% of the federal poverty line by week. Panel (d) shows the average benefit amount awarded to approved applications by week. As these figures suggest, there was little change in the composition of PRC applicants during the sample period, and particularly not in mid-2018, that might have plausibly impacted wait times.<sup>13</sup>

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<sup>12</sup>Notably, even within week, the variance in wait times increased in the second half of 2018, with some applicants still receiving decisions within short windows (e.g., fewer than 7 days), but more receiving decisions much later. As Appendix Figure A.1 shows, the tenth percentile of wait time was roughly the same pre- and post-July 2018 at fewer than 10 days, but the 90th percentile increased from around 40 days to over 90 days.

<sup>13</sup>The increase in average benefit amounts for approved applicants in November 2017 corresponds to the change in maximum benefit levels at that time.

### 3 Data

We have data on the universe of applicants for PRC housing assistance between 2017 and 2019. The data report the date of application receipt as well as the date of application approval or denial. The data also record applicant age and income; the latter is reported as one of nine categories of the federal poverty line (ranging from 0-49% to over 300%). For those whose applications are approved, we have the benefit amount that was issued.<sup>14</sup>

We match PRC applicants to publicly available court records on eviction filings using a combination of residential address and applicant name. The court records include information on eviction filing dates as well as eviction case dispositions. About 14% of the sample had an eviction filing in the six months preceding PRC application, and 20% had an eviction filing in the six months after PRC application. The median time from eviction filing to disposition in the data is 22 days, consistent with the standard practice in Franklin County housing court to schedule an eviction hearing within 3 weeks of a filing. Nearly half (48%) of eviction filings end in a judgment against the tenant on at least one count. Of those with a judgment, 93% have a writ of restitution issued.<sup>15</sup>

We present descriptive statistics for our sample in Table 1. The first and third columns show for approved and denied applicants separately mean applicant age, the fraction of applicants whose income falls into nine different categories of the federal poverty line (FPL), the average benefit amount (for approved applicants only), the average days between application submission and decision, and the fraction with an eviction filing against them in the six months preceding the application. The second and fourth columns restrict the samples of approved and denied applicants to those with no eviction filing against them in the six months preceding PRC application. We focus on these restricted samples when estimating effects of wait times on eviction filings.

The typical applicant in our data is approximately 35 years old. About half of approved

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<sup>14</sup>Unfortunately, we do not have any other demographic characteristics of applicants.

<sup>15</sup>A writ of restitution is court order for a tenant to vacate and that allows a landlord to reclaim any personal property.



applicants have incomes below 100% of the FPL. Income levels are more dispersed among denied applicants, with both more applicants with relatively higher incomes (above 175% of the FPL) as well as more applicants with very low incomes (less than 50% of the FPL). Those with incomes above 165% of FPL are not eligible for PRC assistance. FCDJFS may disqualify a disproportionate number of applicants with very low incomes due to concerns that the one-time assistance alone will not address the need. Other reasons for PRC application denial include not being at least 18 years of age, not living in Franklin County, not having a minor or a pregnant woman in the household, failing to demonstrate need, and failing to provide necessary documentation.

The typical approved applicant received \$1,000–\$1,100 in housing assistance from PRC during our sample period. On average between January 2017 and December 2019, the time from application submission to decision is 20–25 days. Wait times tend to be slightly longer for those applicants eventually denied than for those approved.

## 4 Instrumented Difference-in-Differences Strategy

Our aim to is to estimate the relationship between application processing time and eviction outcomes. Our starting point is a regression of the following form:

$$eviction_i = \beta days_i + \Phi \mathbf{X}_i + \epsilon_i \tag{1}$$

where  $eviction_i$  is an eviction outcome (e.g., filing) for PRC applicant  $i$ ,  $days_i$  is the number of days between application submission and decision for applicant  $i$ ,  $\mathbf{X}_i$  is a vector of observable controls including applicant characteristics as well as fixed effects for the time of application, and  $\epsilon_i$  is the error term. We consider impacts on approved and denied applicants separately.

An OLS estimate of  $\beta$  is likely to be biased because unobserved characteristics of an application and/or individual could be correlated with processing time, but also independently affect eviction outcomes. For example, if FCDJFS prioritizes those who appear most

housing unstable or if applicants in greatest need are quicker to follow up with FCDJFS and submit necessary paperwork, then those applicants with shorter processing times might be more likely to have eviction filings and  $\hat{\beta}$  will be biased downward. That is, it will appear as if shorter processing times “cause” more eviction filings.

To address this issue, we adopt two complementary empirical approaches. Our primary empirical strategy is an instrumented difference-in-differences (IV-DID) and event study approach, comparing changes in eviction outcomes after vs. before the system changeover in 2018 to the same changes in other years. In a supplementary approach that we describe further in Section 5, we implement a leave-one-out IV strategy in which we use average application processing times among those who applied around the same time as an individual as an instrument for their own processing time.

## 4.1 IV-DID Methodology

In our main analysis, we instrument for processing time in a difference-in-differences setup, comparing changes pre- and post-July in 2018 to changes over the same timeframe in other years. This approach leans directly on the exogenous shock to processing time that occurred because of the case management system changeover in mid-2018.

The first stage of our IV-DID strategy is

$$days_i = \alpha post_m \times \kappa_{2018} + \Psi \mathbf{X}_i + v_i \quad (2)$$

and the reduced form is

$$eviction_i = \gamma post_m \times \kappa_{2018} + \Omega \mathbf{X}_i + e_i \quad (3)$$

where  $days_i$  and  $eviction_i$  are defined as in equation (1);  $post_m$  is a dummy equal to 1 for months starting in July of each year and 0 otherwise;  $\kappa_{2018}$  is a dummy equal to 1 for 2018 and 0 otherwise; and  $\mathbf{X}_i$  is a vector of applicant characteristics including age, age squared,

and nine categories of FPL (0-49%, 50-99%, 100-129%, etc.) as well as PRC application submission year, month of the year, week of the month, and day of the week fixed effects. We calculate heteroskedasticity robust standard errors clustered on application day throughout.

The coefficients  $\alpha$  and  $\gamma$  are identified off contrasts between changes in outcomes after vs. before July in 2018 as compared to changes over the same timeframe in other years (2017 and 2019). Under some assumptions, dividing the reduced-form estimate of  $\gamma$  by the first-stage estimate of  $\alpha$  yields the causal effect of an additional day of wait time on the likelihood of an eviction outcome. These assumptions are threefold. First, it must be the case that outcomes would have trended similarly for PRC applicants in the latter half of 2018 as they did in 2017/2019, absent case management system-related delays to application processing (i.e., parallel trends). In order to use it as an instrument, the case management system changeover must be predictive of changes in processing times (i.e., relevance). Finally, it must be the case that the only channel through which the case management system changeover affected eviction outcomes was through its effect on PRC application processing times (i.e., exogeneity).

We provide several provide several pieces of evidence to help validate these assumptions. First, we show evidence of parallel trends using an event study framework in which we estimate year-2018 treatment effects for each month separately (including separate indicators for months pre- and post-July). Second, we show there is a strong first-stage effect of the case management system changeover on application processing times (as Figure 1 shows for the raw data). Finally, we show that the characteristics of applicants did not change around July 2018, ruling out compositional effects as an alternative channel.

One potential threat to identification with the IV-DID approach is that there were some concurrent delays in other program (e.g., SNAP or Medicaid) enrollment in mid-2018 during the case management system changeover. In that case, the reduced-form estimate of  $\gamma$  may capture not only the effects of delays in receipt of PRC assistance, but also the effects of delays in receipt of other forms of assistance. However, based on conversations with

program staff, delays in enrollment in non-PRC programs were substantially smaller than delays experienced with PRC. Unlike applications for PRC assistance, applications for other major programs could be handled in the new OhioBenefits system. Furthermore, the vast majority of PRC applicants are already enrolled in SNAP and Medicaid and therefore are not generally simultaneously applying for PRC assistance and for assistance under other county-administered programs.

When we consider eviction filing as an outcome, we restrict attention to the 86% of PRC applicants with no eviction filing in the six months preceding a PRC application. We consider those with a recent filing in separate analyses on eviction case dispositions. We also use data from 2017–2019 but limit attention to the second and third quarters of each year. This isolates the period in which delays were most pronounced and plausibly exogenous. It also mitigates any confounding effects of the increase in maximum benefits that occurred in the fourth quarter of 2017. However, we test robustness to using only one or the other control year (2017 or 2019) and to using different windows of time around July 1.

## 4.2 IV-DID Results

### 4.2.1 Event Study Estimates

We begin by showing event studies for both the first stage and reduced form, focusing for now on approved PRC applicants only. Panels (a) and (b) of Figure 3 illustrate the results. In each case, event time is measured in months relative to July. Following [Miller \(2023\)](#), we constrain coefficients on the event time dummies to average to zero in the pre-July (i.e., pre-treatment) window.<sup>16</sup>

The first-stage and reduced-form event study estimates support the parallel trends assumption, as the treatment effects prior to event time 0 (July) hover near zero and are statistically insignificant. However, in panel (a) of Figure 3, there is a clear and discrete

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<sup>16</sup>Note that Figure 1 shows times from application submission to decision for all PRC applicants, whereas the event studies only include approved applicants. We consider denied applicants separately.

jump in days to decision after July 2018 as compared to after July in other years. The estimates imply a roughly ten day average increase in processing times for approved applicants. In panel (b), there is also a clear but somewhat more gradual increase in the probability of an eviction filing within 30 days of PRC application after July 2018 as compared to after July in other years.

#### 4.2.2 IV-DID Results

In Table 2, we show the main results from our IV-DID strategy. The first panel of the table shows the first-stage estimates, which echo panel (a) of Figure 3 in showing a roughly ten day increase in average wait times for approved applicants after vs. before July 1, 2018 relative to over the same time period in other years. The estimated change in PRC application processing times is strongly statistically significant and similar regardless of whether we include applicant characteristics along with a rich set of time fixed effects in the regression.

The reduced-form estimates in the second panel of Table 2 indicate a 5.7 percentage point increase in the probability of an eviction filing within one month of PRC application for those individuals who applied for PRC assistance after vs. before July 1, 2018 as compared to over the same time period in other years. Assuming that the only channel by which the case management system changeover in July 2018 affected eviction outcomes was through its effect on wait times, the results imply that an additional day of wait time increases the probability of an eviction filing within 30 days of PRC application among approved applicants by 0.56 percentage points (see the final panel of Table 2). The results are very similar whether we include applicant characteristics (age, age squared, and income relative to the federal poverty line) as controls. Extrapolating from the IV estimate, the results suggest that for ultimately approved applicants, an additional week of wait time increases the probability of an eviction filing within 30 days of PRC application by 3.9 percentage points, or 47% given a sample mean of 8.3%.

We also run a naive OLS regression of an individual's likelihood of an eviction filing

on their own wait time using the same sample of approved applicants. As expected given the likely nature of endogeneity described previously (and in contrast to the IV estimates), the OLS estimates imply that longer wait times *reduce* the probability of an eviction filing within 30 days for ultimately approved applicants.<sup>17</sup> However, while statistically significant, the OLS estimates are small in magnitude.

In Figure 5, we show reduced-form estimates for variations on the outcome variables. In panel (a), we show estimates using as an outcome eviction filing within 30 days, 60 days, 90 days, 120 days, 150 days, and 180 days of PRC application. In panel (b), we do the same using weeks since PRC application (ranging from 1 to 24 weeks). Both figures suggest that the effects of longer wait times materialize almost immediately after PRC application and do not grow (or shrink) subsequently. Indeed, panel (b) suggests that the impacts of longer wait times for assistance largely show up within two weeks of application, indicating that there may be a very short window of time in which the aid is helpful in averting an eviction filing.

We find strong evidence in support of the underlying assumptions and robustness of our IV-DID estimates. In particular, we find no reduced-form effects of the case management system conversion on applicant characteristics, consistent with the evidence presented in Figure 2.<sup>18</sup> The estimates are also robust to dropping the month of June, to expanding or contracting the sample window around July 1, and to restricting the control group to either 2017 or 2019 instead of using both years.<sup>19</sup>

Meanwhile, there is a strong first stage but no reduced-form (or second-stage) effects of the case management system changeover (and associated longer wait times) for those applicants who were ultimately denied PRC assistance.<sup>20</sup> In other words, delays in receiving a denial decision do not affect the likelihood of an eviction filing against an applicant.

We find some suggestive reduced-form evidence that the case management system changeover

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<sup>17</sup>See Appendix Table A.1.

<sup>18</sup>See Appendix Table A.2.

<sup>19</sup>See Appendix Table A.3.

<sup>20</sup>See Appendix Table A.4.

increased the likelihood of judgements against tenants as well as the likelihood that a writ of restitution was issued for a case.<sup>21</sup> These effects appear only for the subset of tenants who apply for PRC assistance with a pre-existing filing. However, given the sample size for this group is small at fewer than 300 applicants, we are hesitant to put much weight on this finding.

We also find some evidence that the effects of longer wait times on eviction outcomes are more pronounced for PRC applicants who are younger and who have lower incomes. Table 3 shows results for these breakouts. The reduced-form effect of the case management system changeover on wait times for those below the median age in the sample (34) is a statistically significant 8.2 percentage points, compared to a statistically insignificant 3.9 percentage points for those above the median age. The reduced-form effect of the changeover on wait times for those with income below the federal poverty line is a statistically significant 8.5 percentage points, compared to a statistically insignificant 3.1 percentage points for those with incomes above the poverty line.

In sum, the IV-DID results point to strong effects of longer wait times for emergency financial assistance on eviction filings that materialize within weeks and that are more pronounced for younger and lower income applicants. However, the IV-DID approach requires certain assumptions to interpret the estimates as the causal effects of longer processing times for PRC. In particular, it must be the case that the only way in which the case management system changeover impacted evictions was through its effect on wait times, and that eviction trends in 2017/2019 serve as valid counterfactuals for eviction trends in 2018.

## 5 Leave-One-Out IV Strategy

As an alternative to the IV-DID, we consider an instrumental variable strategy in which we use the average processing time for those who applied around the same time as an individual as an instrument for that individual's own processing time. As with our prior strategy, the

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<sup>21</sup>See Appendix Table A.5.

aim is to use only variation in processing times that is exogenous to the individual applicant to identify the causal effect of wait times on eviction outcomes. However, the leave-one-out IV approach leverages a different source of underlying variation to identify effects, and in particular one that does not directly rely on the case management system changeover.

## 5.1 Leave-One-Out IV Methodology

The first stage of our leave-one-out IV strategy is

$$days_i = \delta \overline{days}_{j \neq i} + \Pi \mathbf{X}_i + v_i \quad (4)$$

and the reduced form is

$$eviction_i = \theta \overline{days}_{j \neq i} + \Gamma \mathbf{X}_i + e_i \quad (5)$$

where  $days_i$  and  $eviction_i$  are defined as before. In equations (4) and (5),  $\overline{days}_{j \neq i}$  is the mean number of days between application submission and decision among all individuals who submitted their applications around the same time as applicant  $i$ .<sup>22</sup> In our preferred results, we use applications submitted within  $\pm 1$  day (i.e., taking the mean over processing times for all applications submitted the day before, the day of, and the day after applicant  $i$ 's application was submitted). However, we arrive at similar results averaging over processing times for other applications submitted on the same day (i.e., taking the mean over processing times for all applications submitted on the same day as applicant  $i$ 's application) as well as windows of  $\pm 2$  days and  $\pm 3$  days. As before,  $\mathbf{X}_i$  is a vector of applicant characteristics including age, age squared, and nine categories of FPL (0-49%, 50-99%, 100-129%, etc.) as well as year, month of the year, week of the month, and day of the week fixed effects. We calculate heteroskedasticity robust standard errors clustered on application day throughout.

The leave-one-out IV approach is distinct from the IV-DID approach in that it does not

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<sup>22</sup>Our approach is similar to the leave-one-out estimator commonly used in the judge fixed effects literature (e.g., [Dobbie, Goldin and Yang \(2018\)](#)).



directly use the case management system conversion for identification, although it does to some extent take advantage of the increase in the variance in processing times that accompanied the case management system changeover. While the leave-one-out IV strategy does not rely on the parallel trends assumption required for the IV-DID, in order to interpret the Wald estimator  $\hat{\theta}/\hat{\delta}$  as the causal effect of an additional day of wait time on eviction outcomes, it must be the case not only that other contemporaneous applicants' wait times are predictive of one's own wait time, but also that the only channel by which processing times among those who applied around the same time as an individual affect eviction outcomes is through their effect on the individual's own processing time. To validate these assumptions, we show that there is a strong first-stage effect of wait times among others that applied around the same time as an individual on an individual's wait time and that others' wait times are not correlated with individual applicant characteristics.

## 5.2 Leave-One-Out IV Results

In Table 4, we present the first-stage, reduced-form, and IV estimates for our leave-one-out IV strategy, focusing for now on approved PRC applicants only. In the first panel, we show the first-stage estimates of the relationship between an individual applicant's time from PRC application submission to benefit issuance and the average time to decision among all other individuals who applied within one day of the applicant. With a rich set of time fixed effects, the first-stage estimate of 0.474 implies that each additional day that other applicants face between application submission and decision increases the number of days a given applicant faces between application submission and benefit receipt by approximately half a day. The estimate is very similar when we include applicant characteristics in the regression as well. With heteroskedasticity robust standard errors clustered on application day, the first-stage estimates are strongly statistically significant. The F-statistic for the instrument is 39, indicating that the instrument is highly relevant.

The second and third panels of Table 4 present our reduced-form and IV estimates. In our

specification controlling for both application time and applicant characteristics, an additional day of wait time for others who applied around the same time as an individual increases the probability of an eviction filing within 30 days of PRC application by 0.18 percentage points. Dividing this reduced-form estimate by the first-stage estimate in the first panel, we arrive at the IV estimate that each additional day of wait time increases the probability of an eviction filing within one month of PRC application by 0.37 percentage points. In other words, each additional week of processing time increases the probability of an eviction filing within one month by 2.6 percentage points, or 31%. Notably, this estimate is qualitatively similar but somewhat smaller in size than the IV-DID estimate of the effect of an additional week of wait time. This difference could arise because the IV-DID estimate is biased upward due to possible confounding effects of longer wait times for enrollment in other social safety net programs that occurred in the latter half of 2018. It could also reflect the fact that the leave-one-out strategy captures a somewhat different local average treatment effect than the IV-DID.<sup>23</sup>

In Figure 6, we show reduced-form estimates for variations of the outcome variable. In panel (a), we show estimates using as the outcome eviction filing within 30 days, 60 days, 90 days, 120 days, 150 days, and 180 days of PRC application. In panel (b), we do the same using weeks since PRC application. Again echoing the IV-DID results, both figures suggest that the effects of longer wait times materialize almost immediately (within two weeks) after applying and do not grow (or shrink) subsequently.

We find evidence in support of the underlying assumptions and robustness of our leave-one-out IV estimates. To satisfy the exclusion restriction, the instrument (average days from submission to decision among those who applied around the same time as a given applicant) must only affect outcomes through its effect on the endogenous independent variable (days

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<sup>23</sup>In Appendix Table A.6, we show results from a naive OLS regression of an individual’s likelihood of an eviction filing on their own wait time using the same sample of approved applicants. Echoing the results from the previous section and as expected given the likely nature of endogeneity described in Section 4.1, the OLS estimates imply that longer wait times *reduce* the probability of an eviction filing within 30 days for ultimately approved applicants. However, the OLS estimates are economically very small and statistically insignificant.

from submission to decision for a given approved applicant). To provide suggestive evidence that this assumption holds in our context, we run a set of regressions in which we establish that a given applicant’s demographics are not correlated with the wait times of others who applied for PRC assistance in the same window of time. We find no reduced-form effects of the longer average wait times for others on applicant characteristics.<sup>24</sup>

Additionally, the leave-one-out IV estimates are robust to restricting the sample to different application years, although the year-specific estimates are statistically harder to distinguish from zero given the smaller sample sizes.<sup>25</sup> The results are also robust to using different windows of time to define the instrument (e.g., average processing time for applications submitted on the same day,  $\pm 2$  days, or  $\pm 3$  days).<sup>26</sup>

Meanwhile, there is a strong first stage but no reduced-form (or second-stage) effects of longer average wait times (and associated longer individual applicant wait times) for those applicants who were ultimately denied PRC assistance. In other words, as was also seen in the IV-DID results, delays in receiving a denial decision do not affect the likelihood of an eviction filing against an applicant.<sup>27</sup> Also mirroring the IV-DID results, we find some suggestive reduced-form evidence with our leave-one-out strategy that longer average wait times increased the likelihood of judgements against tenants as well as the likelihood that a writ of restitution was issued for a case. These effects are again particularly strong for the subset of tenants who apply for PRC assistance with a pre-existing filing.<sup>28</sup>

Finally, using our leave-one-out instrument, we find that the effects of longer wait times on eviction outcomes are more pronounced for those who have lower incomes and, to a lesser extent, those who are younger. Table 5 shows results for these breakouts. The reduced-form effect of longer average wait times for those below the median age in the sample (34) is

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<sup>24</sup>See Appendix Table A.7. While statistically significant, the “effect” of longer average wait times on applicant age is economically small.

<sup>25</sup>See Appendix Table A.8. Notably, the leave-one-out IV strategy does not require inclusion of 2018, since in contrast to the IV-DID strategy, it does not entirely rely on variation stemming from the case management system changeover.

<sup>26</sup>See Appendix Table A.9.

<sup>27</sup>See Appendix Table A.10.

<sup>28</sup>See Appendix Table A.11.

a statistically insignificant 0.20 percentage points, compared to a (marginally) statistically significant 0.15 percentage point for those above the median age. The reduced-form effect of longer average wait times for those with income below the federal poverty line is a statistically significant 0.28 percentage points, compared to a statistically insignificant 0.07 percentage points for those with incomes above the poverty line.

In sum, the leave-one-out IV estimates strongly corroborate the results of our IV-DID analysis. Notably, these two approaches rely on differing identification assumptions, lending further credence to the overall conclusion that longer processing times have meaningful effects on eviction outcomes.

## 6 Conclusion

Many communities in the U.S. have programs that make financial assistance available to families with low income who are struggling to pay rent. These programs are aimed at reducing housing instability and its myriad costs to families and society. In this paper, we examine the impacts of longer application processing times for emergency housing assistance. Using administrative data from Franklin County, Ohio and taking advantage of exogenous variation in application wait times, we find that among those without a prior eviction, even relatively small delays in receiving assistance sharply increase the probability of an eviction filing against an applicant. The effects of longer wait times tend to be more severe for applicants who have the lowest incomes and who are younger.

Our results have important implications for policy, and in particular for the design and implementation of emergency housing assistance programs. Reducing passive compliance costs for applicants can meaningfully decrease the likelihood of an eviction filing. Of course, reducing wait times is costly, as it typically requires more staff resources and potentially investments in more streamlined application and verification processes. Faster application processing times could increase error rates, and in the longer run could increase the volume

of applications (Pierce and Moulton, 2023). However, evictions are costly to society. The social cost of a typical eviction is estimated at about \$9,250 (Innovation for Justice, 2024). If 48% of filings result in an eviction (as is the case in our sample), then for a county like Franklin County that has approximately 2,500 approved applicants for emergency housing assistance each year, decreasing average wait times for those applicants by one week (26%) would reduce social costs associated with evictions by \$287,490–\$435,120 per year.<sup>29</sup> This reduction in social costs attributable to shorter wait times for emergency assistance may be an underestimate, as shorter wait times could also reduce the likelihood of involuntary moves that do not appear in the housing court records.

Housing insecurity is a large and growing problem in the U.S. Our results speak to important trade-offs governments face in the design and administration of emergency rental assistance programs. Future research can shed more light on the costs and benefits of alternative approaches to delivering financial assistance to those at risk of eviction and homelessness.

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<sup>29</sup>This range is based on our two alternative estimators. We calculate this as  $2,500 \cdot (7 \cdot x) \cdot (0.48 \cdot \$9,250)$ , where  $x$  is alternately 0.0037 or 0.0056. These estimates are from the second column of the final panel in Tables 4 and 2.

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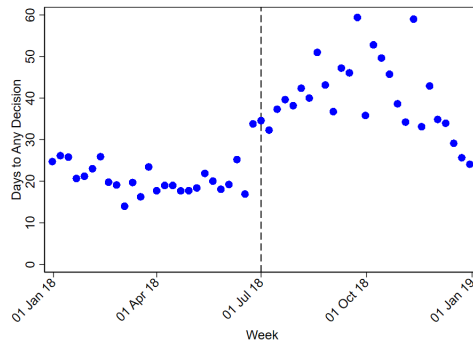
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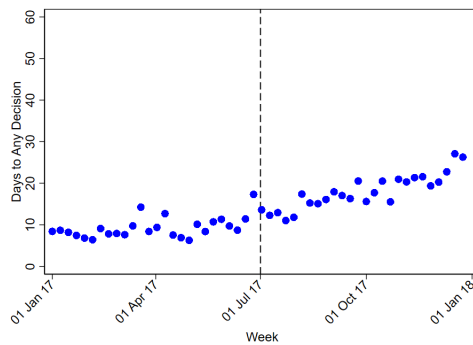


# Figures

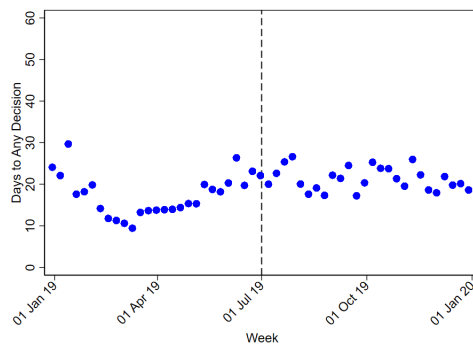
Figure 1: Mean Days to Decision by Week of Application



(a) 2018



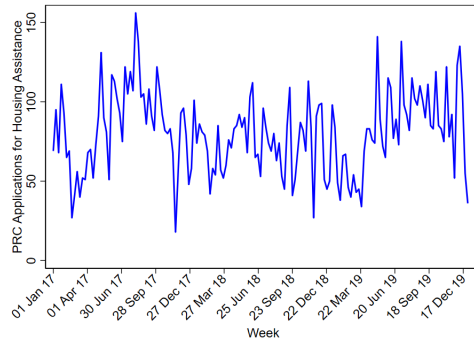
(b) 2017



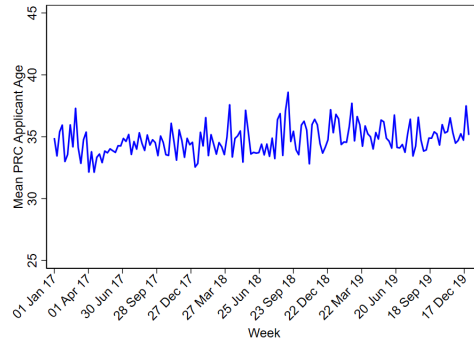
(c) 2019

Note: Mean number of days between application submission and application disposition (approval or denial) by week of application submission by year. Source: Franklin County Department of Job and Family Services (FCDJFS) and authors' calculations.

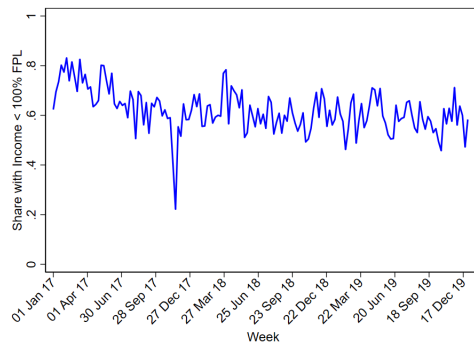
Figure 2: Number of Applications and Applicant Characteristics by Week



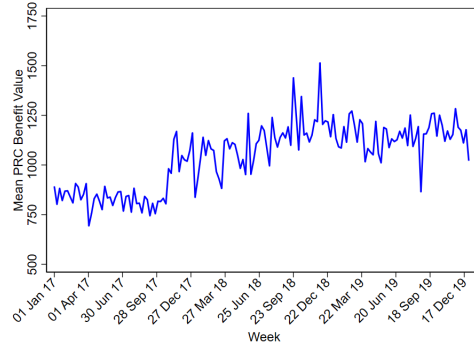
(a) Number of Applications



(b) Average Age of Applicants



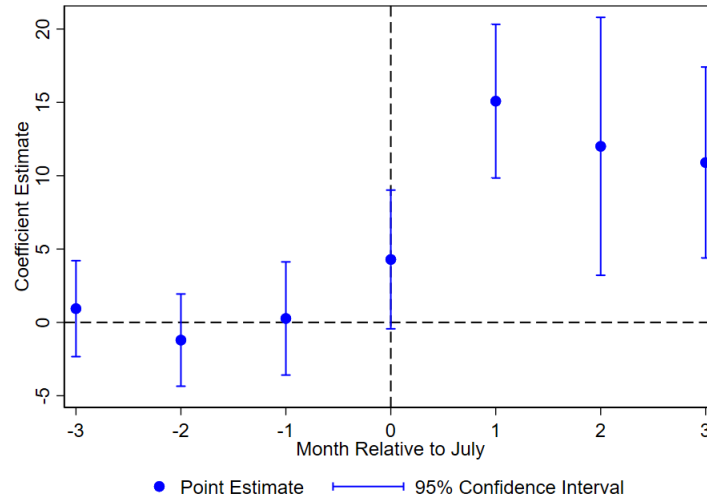
(c) Fraction of Applicants with Income <100% FPL



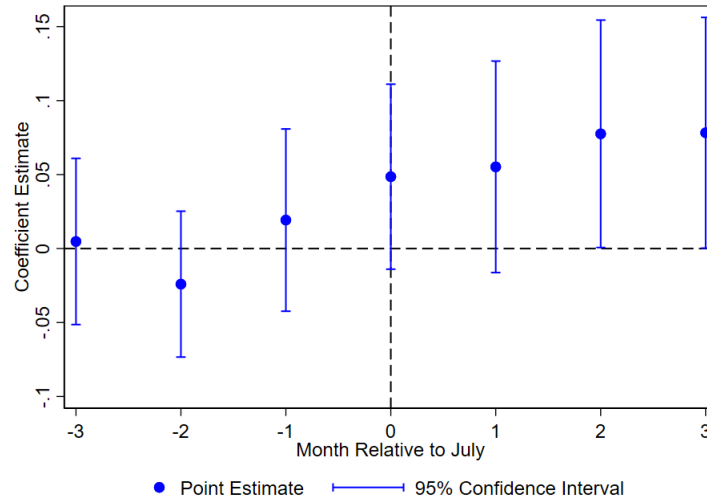
(d) Average Benefit Amount for Approved Applicants

Note: Number of applications for PRC housing assistance and characteristics of PRC applicants each week, January 2017-December 2019. Source: Franklin County Department of Job and Family Services (FCDJFS) and authors' calculations.

Figure 3: First-Stage and Reduced-Form Event Studies



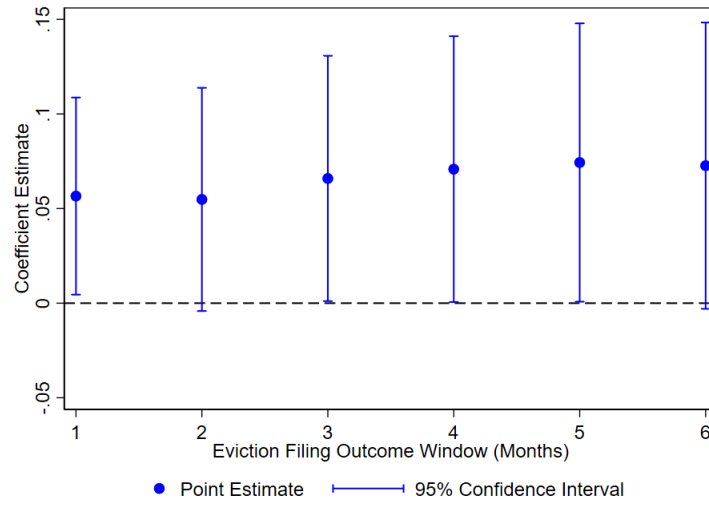
(a) Days to Decision (First Stage)



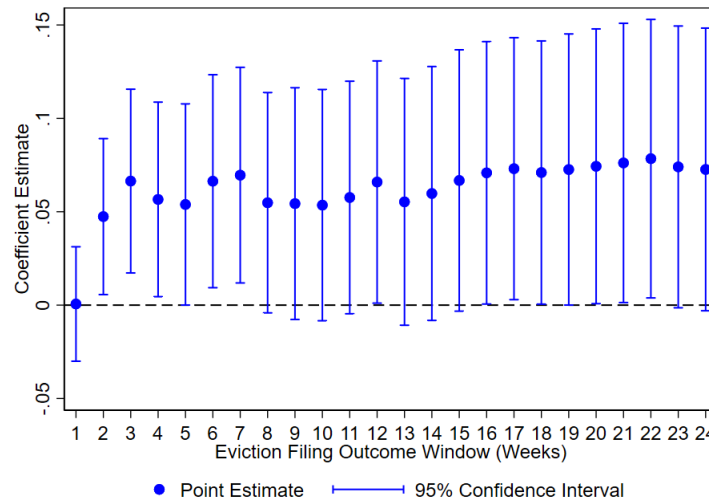
(b) Eviction Filing (Reduced Form)

Note: Event study estimates for (a) days to decision and (b) eviction filing within 1 month for approved applicants, in each case comparing outcomes for April-October 2017-2019. The average of event time coefficients in the -3 to -1 (i.e., April-June) period is normalized to be zero in each figure. Confidence intervals are based on robust standard errors clustered on application day.

Figure 5: IV-DID Reduced Form Using Alternative Outcome Windows



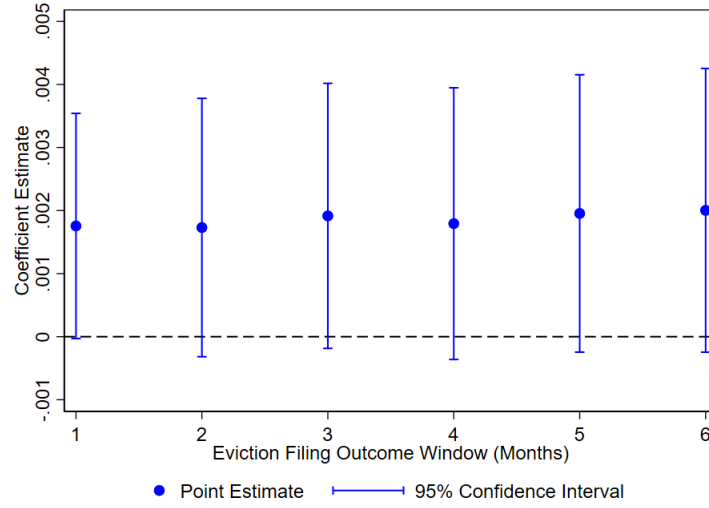
(a) Cumulative over Months



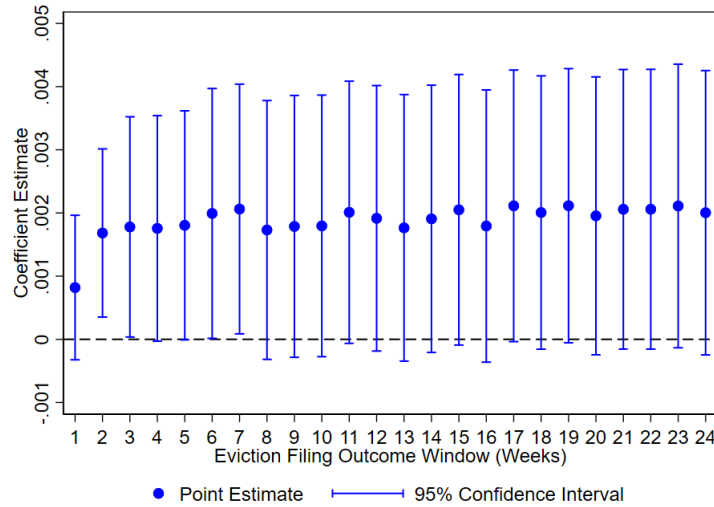
(b) Cumulative over Weeks

Note: Sample includes approved PRC applications for housing assistance between April and September, 2017 through 2019. “Post” is July-September, and “Treat” is the year 2018. Robust standard errors are clustered on application day.

Figure 6: Leave-One-Out IV Reduced Form Using Alternative Outcome Windows



(a) Cumulative over Months



(b) Cumulative over Weeks

Note: Sample includes approved PRC applications for housing assistance with no eviction filing in 6 months prior to application. Each point from a separate regression that includes the full set of time FEs and applicant characteristics. Robust standard errors are clustered on application day.

## Tables

Table 1: Descriptive Statistics

	Approved		Denied	
	Full Sample	No Prior Eviction	Full Sample	No Prior Eviction
Age	34.77	34.88	34.66	34.61
FPL				
0-49%	0.14	0.14	0.41	0.43
50-99%	0.36	0.36	0.26	0.25
100-129%	0.27	0.26	0.16	0.15
130-149%	0.12	0.12	0.04	0.04
150-174%	0.10	0.10	0.06	0.06
175-199%	0.02	0.02	0.04	0.04
200-249%	0.00	0.00	0.02	0.02
250-299%	0.00	0.00	0.01	0.01
Over 300%	0.00	0.00	0.00	0.00
Benefit Amount (\$)	1,066	1,042	-	-
Days to Decision	23.4	24.8	20.0	20.4
Eviction Filing, Prior 6 Mos.	0.14	0.00	0.14	0.00
Applications	4,007	3,445	8,622	7,381

Note: This table shows descriptive statistics based on Franklin County PRC applications submitted between November 2017 and December 2019. The first two columns show mean age, fraction in each category of the federal poverty line, mean benefit amount, the mean days from application submission to decision, and the fraction with an eviction filing in the 6 months prior to application for those applicants whose application was ultimately approved. The second two columns show the same statistics for those applicants whose applications were ultimately denied. The first and third columns are the full sample; the second and fourth column restrict the sample to those without an eviction in the 6 months prior to application. Source: Franklin County Department of Job and Family Services (FCDJFS) and authors' calculations.

Table 2: First Stage, Reduced Form, and IV Estimates for IV-DID

FS: Days to Decision		
Post x Treat	10.25*** (2.10)	10.09*** (2.11)
Mean DV	24.09	24.09
RF: Eviction Filing (30 Days)		
Post x Treat	0.057** (0.026)	0.057** (0.027)
Mean DV	0.083	0.083
IV: Eviction Filing (30 Days)		
Days to Decision	0.0056* (0.0029)	0.0056* (0.0030)
F-Stat	23.94	22.94
Time FEs	✓	✓
Applicant Chars.		✓
Observations	1,879	1,879

Note: Sample includes approved PRC applications for housing assistance between April and September, 2017 through 2019. “Post” is July-September, and “Treat” is the year 2018. Robust standard errors are clustered on application day. Statistically significant at the \* 10%, \*\* 5%, and \*\*\* 1% level.

Table 3: Heterogeneity Tests for IV-DID

RF: Eviction Filing within 30 Days		
	Age Breakouts	
	<34	34+
Post x Treat	0.082*	0.039
	(0.043)	(0.032)
Mean DV	0.096	0.070
Observations	939	940
	FPL Breakouts	
	<100%	100%+
Post x Treat	0.085**	0.031
	(0.038)	(0.037)
Mean DV	0.082	0.085
Observations	1,004	875
Time FEs	✓	✓
Applicant Chars.	✓	✓

Note: Sample includes denied PRC applications for housing assistance between April and September, 2017 through 2019. “Post” is July-September, and “Treat” is the year 2018. Robust standard errors are clustered on application day. Statistically significant at the \* 10%, \*\* 5%, and \*\*\* 1% level.



Table 4: First Stage, Reduced Form, and IV Estimates for Leave-One-Out IV

	FS: Days to Decision	
Mean Wait Time (Days)	0.474*** (0.079)	0.470*** (0.076)
Mean DV	24.8	24.8
	RF: Eviction Filing (30 Days)	
Mean Wait Time (Days)	0.0016* (0.0009)	0.0018* (0.0009)
Mean DV	0.084	0.084
	IV: Eviction Filing (30 Days)	
Own Wait Time (Days)	0.0034* (0.0021)	0.0037* (0.0021)
Mean DV	0.084	0.084
F-Statistic	39.22	39.13
Time FEs	✓	✓
Applicant Chars.		✓
Observations	3,445	3,445

Note: Sample of approved PRC applications with no eviction filing in 6 months prior to application. Robust standard errors are clustered on application day are in parentheses. Statistically significant at the \* 10%, \*\* 5%, and \*\*\* 1% level.

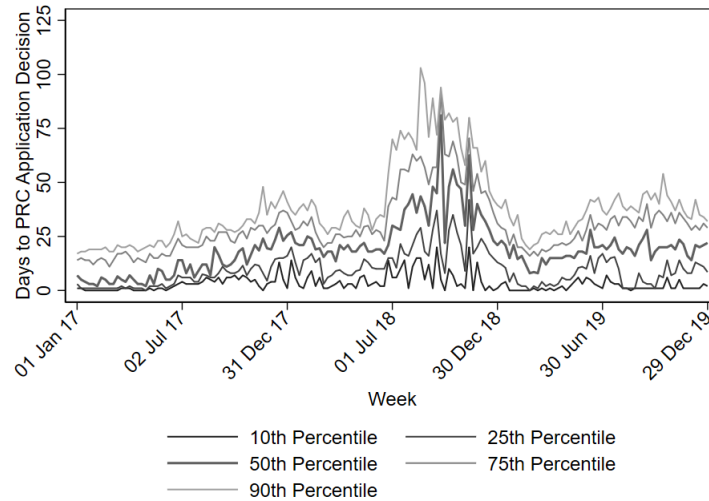
Table 5: Heterogeneity Tests for Leave-One-Out IV

RF: Eviction Filing within 30 Days		
	Age Breakouts	
	<34	34+
Mean Wait Time (Days)	0.0020 (0.0015)	0.0015* (0.0009)
Mean DV	0.103	0.065
Observations	1,727	1,718
	FPL Breakouts	
	<100%	100%+
Mean Wait Time (Days)	0.0028** (0.0014)	0.0007 (0.0012)
Mean DV	0.085	0.083
Observations	1,744	1,701
Time FEs	✓	✓
Applicant Chars.	✓	✓

Note: Sample of approved PRC applications with no eviction filing in 6 months prior to application. Robust standard errors are clustered on application day. Statistically significant at the \* 10%, \*\* 5%, and \*\*\* 1% level.

# A Appendix Figures and Tables

Figure A.1: Distributions of Wait Times by Week of Application



Note: Tenth, 25th, 50th, 75th, and 90th percentiles of number of days between application submission and application disposition (approval or denial) by week of application submission. Source: Franklin County Department of Job and Family Services (FCDJFS) and authors' calculations.

Figure A.2: IV-DID Identification

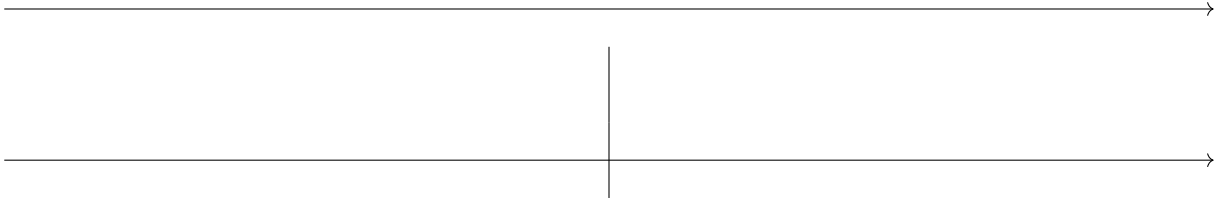


Table A.1: IV vs. OLS Estimates for IV-DID Sample

Eviction Filing within 30 Days		
IV Estimates		
Days to Decision	0.0056*	0.0056*
	(0.0029)	(0.0030)
OLS Estimates		
Days to Decision	-0.0007**	-0.0006**
	(0.0003)	(0.0003)
Mean DV	0.083	0.083
Time FEs	✓	✓
Applicant Chars.		✓
Observations	1,879	1,879

Note: Sample of approved PRC applications with no eviction filing in 6 months prior to application. Robust standard errors are clustered on application day. Statistically significant at the \* 10%, \*\* 5%, and \*\*\* 1% level.

Table A.2: Tests for IV-DID Instrument Exogeneity

	Age	FPL<100%
Post x Treat	0.626	-0.046
	(0.930)	(0.054)
Mean DV	34.86	0.534
Time FEs	✓	✓
Observations	1,879	1,879

Note: Sample includes approved PRC applications for housing assistance between April and September, 2017 through 2019. “Post” is July-September, and “Treat” is the year 2018. Robust standard errors are clustered on application day. Statistically significant at the \* 10%, \*\* 5%, and \*\*\* 1% level.

Table A.3: IV-DID Robustness

	Drop June	Mar.–Oct.	May–Aug.	2017-18	2018-19
FS: Days to Decision					
Post x Treat	10.18***	9.49***	9.75***	9.54***	10.56***
	(2.16)	(2.59)	(2.32)	(2.60)	(2.18)
RF: Eviction Filing (30 Days)					
Post x Treat	0.069**	0.053**	0.050	0.070**	0.048*
	(0.027)	(0.024)	(0.032)	(0.031)	(0.030)
Time FEs	✓	✓	✓	✓	✓
Appl. Chars.	✓	✓	✓	✓	✓
Observations	1,591	2,384	1,364	1,021	1,377

Note: Sample includes approved PRC applications for housing assistance between April and September, 2017 through 2019. “Post” is months starting in July, and “Treat” is the year 2018. Robust standard errors are clustered on application day. Statistically significant at the \* 10%, \*\* 5%, and \*\*\* 1% level.

Table A.4: IV-DID Results for Denied Applicants

FS: Days to Decision		
Post x Treat	23.60***	23.80***
	(2.21)	(2.23)
Mean DV	19.47	19.47
RF: Eviction Filing (30 Days)		
Post x Treat	0.004	0.005
	(0.020)	(0.020)
Mean DV	0.086	0.086
IV: Eviction Filing (30 Days)		
Days to Decision	0.0002	0.0002
	(0.0008)	(0.0008)
F-Stat	113.12	113.51
Time FEs	✓	✓
Applicant Chars.		✓
Observations	4,106	4,106

Note: Sample includes denied PRC applications for housing assistance between April and September, 2017 through 2019. “Post” is July-September, and “Treat” is the year 2018. Robust standard errors are clustered on application day. Statistically significant at the \* 10%, \*\* 5%, and \*\*\* 1% level.

Table A.5: IV-DID Results for Eviction Case Dispositions

Reduced Form Estimates				
	Judgement within 30 Days		Writ Issued within 30 Days	
	No Prior Filing	Prior Filing	No Prior Filing	Prior Filing
Post x Treat	0.004	0.308***	0.007	0.257***
	(0.010)	(0.097)	(0.009)	(0.093)
Mean DV	0.016	0.209	0.014	0.189
Time FEs	✓	✓	✓	✓
Applicant Chars.	✓	✓	✓	✓
Observations	1,879	296	1,879	296

Note: Sample includes denied PRC applications for housing assistance between April and September, 2017 through 2019. “Post” is July-September, and “Treat” is the year 2018. A prior filing means an applicant has an eviction filing against them within 6 months of PRC application. Robust standard errors are clustered on application day. Statistically significant at the \* 10%, \*\* 5%, and \*\*\* 1% level.

Table A.6: IV vs. OLS Estimates for Leave-One-Out IV Sample

IV and OLS Estimates for Eviction Filing within 30 Days		
	IV Estimates	
Own Wait Time (Days)	0.0034*	0.0037*
	(0.0021)	(0.0021)
Mean DV	0.084	0.084
F-Statistic	39.22	39.13
	OLS Estimates	
Own Wait Time (Days)	-0.0004	-0.0003
	(0.0002)	(0.0002)
Mean DV	0.084	0.084
Time FEs	✓	✓
Applicant Chars.		✓
Observations	3,445	3,445

Note: Sample of approved PRC applications with no eviction filing in 6 months prior to application. Robust standard errors are clustered on application day. Statistically significant at the \* 10%, \*\* 5%, and \*\*\* 1% level.

Table A.7: Tests for Leave-One-Out IV Instrument Exogeneity

	Age	FPL<100%
Mean Wait Time (Days)	0.061**	-0.0004
	(0.026)	(0.0016)
Mean DV	34.88	0.506
Time FEs	✓	✓
Observations	3,445	3,445

Note: Sample of approved PRC applications with no eviction filing in 6 months prior to application. Robust standard errors are clustered on application day. Statistically significant at the \* 10%, \*\* 5%, and \*\*\* 1% level. †IV estimates for eviction nearly identical if we control for benefit amount.

Table A.8: Leave-One-Out IV Robustness, Application Year

Eviction Filing within 30 Days				
	Application Year			
	2017-2019	2017	2018	2019
Mean Wait Time (Days)	0.0018*	0.0028	0.0025	0.0011
	(0.0009)	(0.0033)	(0.0018)	(0.0021)
Mean DV	0.084	0.064	0.082	0.098
Observations	3,445	947	996	1,502
Time FEs	✓	✓	✓	✓
Applicant Chars.	✓	✓	✓	✓

Note: Sample of approved PRC applications with no eviction filing in 6 months prior to application. Robust standard errors are clustered on application day. Statistically significant at the \* 10%, \*\* 5%, and \*\*\* 1% level.

Table A.9: Leave-One-Out IV Robustness, Alternative Instrument Construction

Eviction Filing within 30 Days		
A. Same Day		
Own Wait Time (Days)	0.0046*	0.0051*
	(0.0027)	(0.0028)
F-Statistic	24.505	22.651
Observations	3,430	3,430
B. $\pm 1$ Day Window		
Own Wait Time (Days)	0.0034*	0.0037*
	(0.0021)	(0.0021)
F-Statistic	39.220	39.128
Observations	3,445	3,445
C. $\pm 2$ Day Window		
Own Wait Time (Days)	0.0038*	0.0041*
	(0.0023)	(0.0012)
F-Statistic	25.727	24.960
Observations	3,445	3,445
D. $\pm 3$ Day Window		
Own Wait Time (Days)	0.0032	0.0036*
	(0.0020)	(0.0020)
F-Statistic	27.129	26.286
Observations	3,445	3,445
Time FEs	✓	✓
Applicant Chars.		✓

Note: Sample of approved PRC applications with no eviction filing in 6 months prior to application. The F-Statistic reported is for the excluded instrument. Panel A omits 15 applications for which there were no other applications submitted on the same day (such that the instrument is undefined). Robust standard errors are clustered on application day. Statistically significant at the \* 10%, \*\* 5%, and \*\*\* 1% level.

Table A.10: Leave-One-Out IV Results for Denied Applicants

Eviction Filing within 30 Days		
IV Estimates		
Own Wait Time (Days)	0.0002	0.0003
	(0.0004)	(0.0004)
Observations	4,372	4,372
OLS Estimates		
Own Wait Time (Days)	-0.000003	-0.000003
	(0.00013)	(0.00013)
Observations	4,372	4,372
Time FEs	✓	✓
Applicant Chars.		✓

Note: Sample of denied PRC applications with no eviction filing in 6 months prior to application. Robust standard errors are clustered on application day. Statistically significant at the \* 10%, \*\* 5%, and \*\*\* 1% level.



Table A.11: Leave-One-Out IV Results for Eviction Case Dispositions

	Reduced Form Estimates			
	Judgement within 30 Days		Writ Issued within 30 Days	
	No Prior Filing	Prior Filing	No Prior Filing	Prior Filing
Mean Wait Time (Days)	0.0003 (0.0003)	0.0056* (0.0029)	0.0004 (0.0003)	0.0051* (0.0028)
Mean DV	0.015	0.217	0.012	0.201
Time FEs	✓	✓	✓	✓
Applicant Chars.	✓	✓	✓	✓
Observations	3,445	562	3,445	562

Note: Sample of approved PRC applications with no eviction filing in 6 months prior to application. Robust standard errors are clustered on application day. Statistically significant at the \* 10%, \*\* 5%, and \*\*\* 1% level.