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Does the EITC Buffer against Neighborhood Transition? Evidence from Washington, DC†

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The recent economic boom of Washington, DC (DC) has generated concerns that many of its poor, nonwhite residents are being displaced. These concerns are not idle: between 2000 and 2010, median household income increased 21 percent; the share of black residents in the city, by contrast, decreased from over 60 percent to approximately 50 percent (Tatian and Lei 2014). More striking: similar to neighborhood gentrification patterns in other cities, many previously black neighborhoods in northwest (NW) Washington are now predominantly white (DC Office of Planning 2012). Some attribute these demographic changes to an emerging affordability problem as DC rents and housing prices have substantially increased since 2000.[1] Similar to other rapidly gentrifying cities, low-income residents who want to remain in DC face increasing challenges to do so (Hendey, Tatian, and MacDonald 2014).

Government solutions, such as public housing or Section 8 expansions, are increasingly difficult to implement as building new housing in DC is costly and potential Section 8 landlords increasingly find the program unattractive (Cunningham, Sylvester, and Turner 2000). Yet, if the primary problem facing poorer residents is a lack of money, an alternative is direct cash subsidies. One such program is the Earned Income Tax Credit (EITC), a refundable tax credit aimed at low-income working families with dependents that varies between 7 to 45 cents per dollar earned up to an annual maximum.[2] Relevant to our study, DC provides a generous supplemental credit up to 40 percent of the federal credit.

Using a panel of Washington, DC tax filers, we exploit increases in the Federal and DC supplemental EITC to study whether cash transfers reduce the likelihood that recipient families exit gentrifying neighborhoods. Our study is the first to examine mobility in this context. We conduct two analyses. The first exploits the establishment and three expansions of the DC supplement to the federal credit since 2000, finding evidence that larger credits are associated with a decreased likelihood that married couples exit. Larger credits were not strongly related to mobility among singles though, in some cases, were associated with decreased exit from gentrifying neighborhoods. We then examine the marginal increase in the overall credit from 40 to 45 cents on the dollar for households with three or more qualifying children. Following the difference-in-difference approach proposed in Hardy, Muhammad, and Samudra (2015), we estimate a slight reduction in the likelihood of residing in a gentrifying neighborhood for married households. We estimate no effect for single families.

I. Data and Empirical Model

Our data consists of individual-level income tax records for DC residents between 2001 and 2013. The unbalanced panel contains 99,596 married filers and 179,989 single parent filers and allows for exit and nonfiling which may reflect periods of joblessness, geographic mobility out

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[1] For example, HUD reports that the average rental rate for a two-bedroom apartment in the city increased 41 percent between 2000 and 2005.

[2] The details and importance of this policy have been established by scholars on a number of dimensions. See Nichols and Rothstein (forthcoming) for more discussion.

of DC, or mortality. The balanced panel contains 13,047 married tax filers and 18,005 single parent tax filers. Dollar denominated values are adjusted using the 2009 personal consumption expenditures deflator (PCE).[3]

Our outcome is the probability of living in a gentrifying neighborhood. Following Ellen and O'Regan (2011), we define gentrifying neighborhoods as those with median income below the city's median in 2001 *and* a 2001–2013 median income percent change exceeding the city's increase over the period. We assign DC tax filers to gentrifying neighborhoods using these criteria.

We estimate models for the probability of residing within a gentrifying neighborhood G_{it}^{j} of the following form:

$$G_{it}^{j} = \alpha + \gamma E_{it} + \sum_{k} \delta_k Credit_k + \sum_{k} \mu_k E_{it} \times Credit_k + \tau X_t + \psi_i + \epsilon_{it}.$$

Here, we group households by filing status j based upon their eligibility E_{it} for the EITC, and then control for whether the city's EITC was 10–25 percent (calendar year 2001–2005), 35 percent (calendar year 2006–2008), or 40 percent (calendar year 2009–2013). These "rate" variables are time-period dichotomous variables based on the level of the DC EITC at a particular point in time. We define the 2001–2005 time period as our baseline omitted group, when the local credit was enacted for one year at 10 percent of the federal credit and quickly increased to 25 percent the next year. The relevant estimates derive from the interaction of credit level and eligibility. We also include a broad set of city-level variables describing changes in the overall economic environment.[4]

II. Main Results

Table 1 presents selected coefficients for our baseline specification that exploits variation over time in the generosity of the credit to DC residents to examine how it may affect the likelihood of moving from gentrifying neighborhoods. The first two columns of Table 1 present estimates separately for married and single using the full sample, allowing for the possibility of some DC tax filers to leave the sample. These sample exits are most often due to residents leaving DC for nearby suburbs in Maryland or Virginia. The last 2 columns, by contrast, restrict the sample to only those we can observe every year in the sample. In addition to the policy variables of direct interest, all models include city-level controls and individual tax filer fixed effects.

TABLE 1—IMPACT OF INCREASED EITC ON PROBABILITY OF RESIDING IN A GENTRIFYING NEIGHBORHOOD, 2001–2013

	Unbalanced married (1)	Single (2)	Balanced married (3)	Single (4)
35% DC credit	0.012	0.012	−0.011	−0.014
	[0.002]	[0.002]	[0.003]	[0.004]
40% DC credit	−0.022	−0.004	−0.005	−0.011
	[0.003]	[0.003]	[0.004]	[0.004]
35% DC credit × eligible	0.008	−0.011	0.034	−0.003
	[0.005]	[0.003]	[0.009]	[0.005]
40% DC credit × eligible	0.014	−0.009	0.027	−0.003
	[0.005]	[0.003]	[0.010]	[0.006]
Observations	99,596	179,989	13,047	18,005

Notes: Coefficient estimates from linear probability model for probability of residing in a gentrifying neighborhood. All models include tax filer fixed effects, food stamp and cash welfare levels, and a set of time-varying city level economic measures including DC unemployment rate and DC gross state product. Standard errors are shown in brackets.

Among those eligible for the EITC credit, the increases in the DC credit to 35 percent and 40 percent each significantly increased the likelihood that married families in the unbalanced panel (column 1) would reside in a gentrifying neighborhood by approximately 1 percentage point relative to when the credit was 10 to 25 percent. By contrast, the credit seemed to reduce the likelihood single families would live in a gentrifying neighborhood by a similar magnitude. Turning to the balanced models, we find that the effect of the credit among eligible married couples is stronger. The increase to a 35 percent credit increased the probability that married couples would live in a gentrifying neighborhood by approximately 3 percentage points; the 40 percent credit is associated with

[3] See Hardy, Muhammad, and Samudra (2015) and the online Appendix for further discussion of the DC income tax panel data.

[4] We draw information on the level of transfer payments, minimum wage payments, and the strength of the local economy from the University of Kentucky Center for Poverty Research (UKCPR) National Welfare Database.

TABLE 2—IMPACT OF TARGETED EITC INCREASE ON PROBABILITY OF RESIDING IN A GENTRIFYING NEIGHBORHOOD, 2001–2013

	Unbalanced married (1)	Single (2)	Balanced married (3)	Single (4)
ARRA × three dep.	0.003 [0.005]	−0.013 [0.005]	−0.004 [0.007]	0.000 [0.009]
ARRA × eligible	0.012 [0.004]	−0.002 [0.003]	0.018 [0.007]	0.001 [0.005]
Three dep. × eligible	0.012 [0.007]	−0.004 [0.007]	0.026 [0.015]	−0.004 [0.016]
Three dep. × eligible × ARRA	−0.017 [0.009]	0.001 [0.004]	−0.017 [0.016]	−0.005 [0.008]
Observations	99,596	179,989	13,047	18,005

Notes: Coefficient estimates from linear probability model for probability of residing in a gentrifying neighborhood. All models include tax filer fixed effects, food stamp and cash welfare levels, and a set of time-varying city level economic measures including DC unemployment rate and DC gross state product. Standard errors are shown in brackets.

an increased probability of approximately 2.5 percentage points. We find no effect, however, for singles in the balanced sample.

Table 2 reports parameter estimates of a difference-in-difference model that focuses on a particular group that received an increase in their EITC credit by virtue of the American Recovery and Reinvestment Act passed in 2009. This law created a new category for people with three or more qualifying dependents in which they received an additional 5 cents on every dollar earned relative to those with just two qualifying dependents. Overall, we find little effect of this change on location decisions. For married couples with three or more dependents, establishment of this new category was associated with a 1.7 percentage point decrease in the likelihood of living in a transitioning neighborhood. On the other hand, we find no effects for singles. Admittedly, this is a small margin and households on the margin of remaining in a gentrifying neighborhood and moving may be unaffected by this small additional credit.

III. Conclusion

Overall, our evidence on the EITC-mobility relationship is mixed, potentially because EITC increases may be too small or ill-timed to substantially affect choices. In particular, the mean total EITC of $2,800 is approximately 40–45 percent of the typical annual increase in rent.[5] Moreover, changes to non-pecuniary neighborhood characteristics such as social networks and amenities may make living elsewhere more attractive. In future work, we will explore these factors and how they may interact with government anti-poverty policy.

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[5] This calculation is based on an assumption that the annual increase is around $500 per month.