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# Evolution of the New Market Tax Credit

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**Abstract:** The New Market Tax Credit (NMTC) is a place-based policy in the United States which annually incentivizes billions in direct investments towards selected impoverished communities. I document how project characteristics and NMTC claimants have changed over the lifetime of the policy. The share of real estate projects has declined by over 30 percentage points and the share of projects in metropolitan areas has declined by over 20 percentage points. Although available to both corporate and individuals tax filers, the NMTC is primarily claimed by corporate filers. NMTC claimants have higher levels of income and assets than the average taxpayer. By 2018, the NMTC is over 45% of all general business credits for NMTC claimants. I also quantify how economic conditions are correlated with the probability and amount of NMTC investment a tract receives. Cross-sectional comparisons within states indicate tracts with greater poverty rates are correlated with a higher likelihood of receiving NMTC investment and receiving more investment. However, comparisons within tracts across time are inconclusive.

**Keywords:** tax credits, place-based policy, new market tax credit, business tax

**JEL Classification:** H20, H25, R12, R38, G18

## 1 Introduction

Governments frequently implement place-based policies, such as Opportunity Zones in the United States, the Local Enterprise Growth Initiative in the United Kingdom, or Law 488 in Italy, to incentivize investment and improve economic conditions in impoverished areas. The New Market Tax Credit (NMTC) attempts to increase the flow of financial capital to businesses in census tracts which meet certain criteria, primarily sufficiently low income or high rates of poverty. The

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The views and analysis expressed here are those of the author and do not necessarily represent the views or policies of the U.S. Department of the Treasury.

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NMTC program has provided \$25 billion worth of tax credits for financial investment in designated communities since its inception in 2000.

In this paper I characterize how investments from the program and claimants of the NMTC have changed over time. I focus on the targeting of credits to rural versus urban areas, the role of real estate projects, and characteristics of NMTC claimants. The share of real estate projects has declined by over 30 percentage points and the share of projects in metropolitan areas has declined by over 20 percentage points since 2006. I document that NMTC claimants have higher levels of income and assets than the average taxpayer. I also illustrate the increase in the relative importance of the NMTC as it has become a higher share of general business credits for NMTC claimants. By 2018, the NMTC had risen to over 45% of the general business credits for NMTC claimants. Finally, I document the economic conditions of the areas that received NMTCs.

Understanding the types of projects which secure investment and how those investments are financed helps contextualize the ongoing debate around place-based policies and targeted economic development more generally. The theoretical basis for place-based policies generally require the presence of market failures or the existence of externalities. Proponents of place-based policies have naturally looked to spatial deviations to justify their use. Without these deviations, then in markets with perfect labor mobility and inelastic housing supply the benefits of a location-specific subsidy or investment accrue to existing landowners, rather than residents (Neumark and Simpson 2015). With imperfect labor mobility, residents can potentially benefit but those benefits must be weighed against inefficient spatial investment, deadweight loss due to taxation, alternative use of public funds, and other costs. Urban economists have highlighted agglomeration economies, roughly defined as externalities arising due to the effect of population density on productivity, as a potential justification for place-based policies. Economists have identified and critiqued potential mechanisms underlying agglomeration economies such as thicker labor markets (Moretti 2011), knowledge spillovers (Moretti 2012), and industrial clusters (Duranton 2011). An alternative market failure centers on the spatial mismatch hypothesis which argues frictions in labor or housing markets limit resident mobility and their ability to take advantage of economic opportunities in other locations. This argument has historically been especially salient in the United States due to the country's history of racism and red lining but similar issues have arisen in other countries due to race, immigration status, or caste. Critics of place-based policies, such as Glaeser and Gottlieb (2008), have raised concerns about the aggregate welfare implications of place-based policies, especially given the difficulty in understanding how elasticities of productivities vary spatially. By documenting the types of projects, the changing share of projects in urban areas, and sources and incentives for financing

a particular place-based policy, I contribute towards an understanding of where market failures must exist to justify the continued use of place-based policies and the opportunity cost of that investment.

Studying the NMTC specifically, Gurley-Calvez et al. (2009) use investor behavior through 2004 to infer whether NMTC investment represented additional investment in low-income communities. They found encouraging results regarding individual investors, noting that at least some portion of investment represented new financial capital for low-income communities. However, for corporate investors, who claim over 99% of NMTCs in recent data, they find no evidence corporations are increasing investment but note corporations could be shifting investment from high-income to low-income communities. While Gurley-Calvez et al. (2009) examine changes in investment, Freedman (2012) examines the effect of the NMTC program on economic outcomes. He addresses the selection problem with a regression discontinuity design (RDD) that exploits the maximum income criteria for census tracts. He finds the NMTC reduces poverty and unemployment in low-income tracts. He also finds evidence the results may in part be due to changes in the composition of residents, thus highlighting the need for disaggregated data. Also utilizing an RDD, Harger and Ross (2016) examine the effect of the NMTC on business location and find evidence the NMTC increased the new businesses and new employment. They extend the analysis to examine effects by industry and, consistent with NMTC investment patterns, find increased employment and greater business creation in capital-intensive industries. Freedman and Kuhns (2018) focus on a specific industry of particular policy interest, retail food establishments, and find the NMTC program does induce growth in the retail food industry, especially among supermarkets. More recently, the Urban Institute recently released multiple detailed reports on the NMTC program which describing its effectiveness, how congressional funding has changed over time, unique data on types of projects, characteristics of the financial intermediaries which facilitate investment, and the program's impact on local economic conditions and housing markets.<sup>1</sup> I contribute to this literature by noting how some key characteristics of projects have changed over time, namely the share which are classified as real estate and the share of metropolitan projects. To the best of my knowledge this paper also provides the first discussion of NMTC claimants, their characteristics, and how they compare to taxpayers more generally.

In Section 2, I give a brief overview on the New Market Tax Credit program and describe how it has changed since it started. In Section 3, I describe the project and claimant data and provide summary statistics. In Section 4, I show how NMTC

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<sup>1</sup> See [urban.org/nmtc](http://urban.org/nmtc) for a comprehensive list of the Urban Institute's NMTC reports.

projects have changed from 2003 to 2019. In Section 5, I detail how NMTC claimants and their use of the credit have evolved since the program's inception. In Section 6, to better understand how economic conditions correlate with tract selection, I use a logit model to quantify the marginal effect of changes in economic conditions on the observed probability a tract receives NMTC investment. Then, conditional on receiving investment, I examine to what extent economic conditions correlate with investment levels. Section 7 concludes.

## 2 The New Market Tax Credit

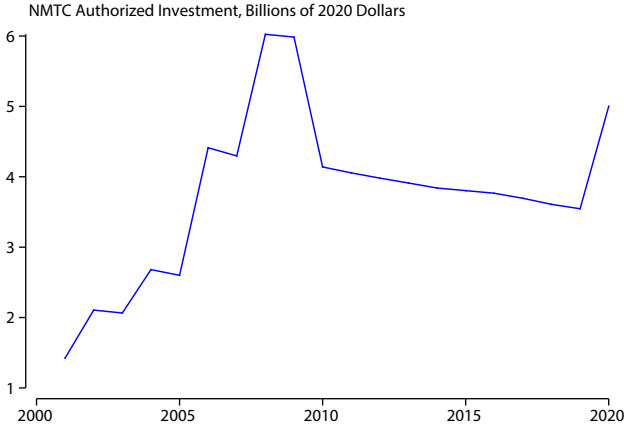
The New Market Tax Credit program was created by the Community Renewal Tax Relief Act of 2000. The program is administered by the Community Development Financial Institutions (CDFI) Fund at the U.S. Department of the Treasury. The CDFI Fund does not distribute credits *per se* but instead allocates, through a competitive process, investment authority to qualified applicants, called Community Development Entities (CDE), up to a congressionally approved limit. Investors receive a credit against their federal tax liability in exchange for investing in a CDE. The CDE acts as a financial intermediary which directs capital to qualified businesses in low-income communities. Investors receive credits spread over 7 years which total 39% of their investment. Since the program's inception, the CDFI Fund has allocated over \$65 billion worth of investment authority. For a more detailed description of the program, see Marples and Lowry (2019).

Businesses are eligible to receive an investment by a CDE, often a loan with preferential terms, if they are located in a qualifying census tract. In general, a census tract qualifies if it has a poverty rate of at least 20%, has a median family income below 80% of the statewide family income, or, if in an MSA and has a median family income below 80% of the metropolitan area median income.<sup>2</sup> Approximately 43% of the census tracts in the US are eligible to receive NMTC investments. Eligible tracts include approximately 40% of the U.S. population.

Figure 1 displays the value (in 2020 dollars) of investment authority granted by Congress since the program's enactment. Since 2006 the CDFI has had an annual investment authority for NMTC investments of at least \$3.5 billion nominally. The Gulf Opportunity Zone Act of 2005 increased the nominal investment authority to \$5 billion with a share of the additional funding directed to the gulf coast regions impacted by hurricanes Katrina, Rita, and Wilma. The Consolidated

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<sup>2</sup> Tracts can also qualify through criteria regarding designated target populations (see Internal Revenue Bulletin 2006–29, Notice 2006–60, issued July 17, 2006), low population tracts, and high migration rural counties.



**Figure 1:** Investment authority. The figures above displays the investment authority in 2020 dollars granted by Congress. Investment authority is allocated by the Community Development Financial Institutions (CDFI) Fund at the U.S. Treasury Department to Community Development Entities (CDE). As discussed in Section 2, each dollar of investment authority generates a potential 39 cents of New Market Tax Credits for investors in CDEs.

Appropriations Act of 2021, signed by President Trump in December of 2020, increased the annual investment authority to \$5 billion through 2025. President Biden has proposed making the program permanent, with the annual amount indexed to inflation after 2025. The NMTC program has traditionally received bipartisan support, with credits authorized in every year since the program’s inception.

### 3 Data

In order to characterize NMTC projects and claimants I rely on two primary data sources. NMTC project data comes from the CDFI Fund at the U.S. Department of the Treasury. The CDFI data covers all NMTC projects through 2019. The CDFI data is at the project level and includes the census tract, investment amount, whether the project is a real estate investment, and whether or not the census tract is in a county designated as metropolitan by the U.S. Office of Management and Budget. I exclude projects from U.S. territories. I have a final set of 6807 projects which span all 50 states and DC. Table 1 provides summary statistics for the project data. Total investment is the sum of Qualified Low-Income Community Investment (QLICI). Investment per eligible population is the total investment divided by the total population in census tracts where investment was made. Metropolitan is the

**Table 1:** Summary statistics: NMTC projects.

| <b>Project characteristics</b> |                |
|--------------------------------|----------------|
| Projects                       | 6807           |
| Total investment               | 55,879,959,324 |
| Investment per eligible pop.   | 2313           |
| Metropolitan (%)               | 81             |
| Real estate (%)                | 46             |

The table above displays summary statistics for projects which have received NMTC investment from 2003 to 2019 according to the Community Development Financial Institutions (CDFI) Fund. Total investment is the sum of Qualified Low-Income Community Investment (QLICI). Investment per capita is the total investment divided by the total population in census tracts where investment was made. Metropolitan is the percentage of investment in metropolitan areas. Real estate is the percentage of investment in projects classified as real estate by the CDFI.

percentage of investment in metropolitan areas. Real Estate is the percentage of investment in projects classified as Real Estate by the CDFI. Through 2019, CDEs reported approximately \$56 billion in allocated investment, with 81% of investment occurring in metropolitan areas and 46% going towards real estate projects.

For claimant data, I utilize firm-level corporate tax data for the years 2003–2018 from the IRS’ Statistics of Income, a stratified random sample conducted annually on initial tax returns.<sup>3</sup> Table 2 compares Corporations with NMTC claimants. Panel A includes average characteristics such as Gross Receipts, Taxable Income, Taxes Paid, Total Assets, and NMTC Claims.<sup>4</sup> All values are reported in 2020 dollars. NMTC claimants have historically had substantially larger gross receipts, income, and owed more in taxes. In addition, NMTC claimants report higher total assets, approximately \$148 billion compared to approximately \$50 million for the average corporation. Panel B displays the share of income and share of firms by the income distribution. For the population of corporations, 83% of firms have income less than \$1 million and 60% of income is reported by firms with income between \$1 billion and \$100 billion.

<sup>3</sup> I focus on corporate claimants as the majority of NMTC claims, over 99%, are made by corporate filers. I also exclude sub-chapter S Corporations as those credits will “pass-through” to individual returns. SOI data include consolidated tax returns with multiple subsidiaries filing as part of the consolidation. Throughout the paper I use the term “firm” to refer to the consolidated taxpayer.

<sup>4</sup> The data are based on Form 1120 and Form 3800. Items may shift year to year as tax forms are redesigned but for illustrative purposes I detail each item’s location on 2018 tax forms. Gross Receipts are from line 1a on Form 1120. Taxable Income is line 30 on Form 1120. Taxes paid is line 31 on Form 1120. Total Assets is Form 1120 Schedule L 15d. NMTC claims are found on line 1i on Form 3800 Part III. Firms may report credits on Form 3800 but then carry forward those credits up to 20 years.

**Table 2:** Summary statistics: corporations and NMTC claimants.

| <b>Panel A: Mean characteristics (in thousands, \$2020)</b> |                         |  |                       |  |
|---|-------------------------|--|-----------------------|--|
|   | <b>All corporations</b> |  | <b>NMTC claimants</b> |  |
| Gross receipts  | 12,386                  |  | 7,568,160             |  |
| Taxable income  | 769                     |  | 1,187,146             |  |
| Taxes paid  | 186                     |  | 234,253               |  |
| Total assets  | 52,740                  |  | 148,751,575           |  |
| NMTC claims   | 1                       |  | 7697                  |  |

|                              | <b>All corporations</b> |                  | <b>NMTC claimants</b> |                  |
|------------------------------|-------------------------|------------------|-----------------------|------------------|
|                              | <b>Income (%)</b>       | <b>Firms (%)</b> | <b>Income (%)</b>     | <b>Firms (%)</b> |
| <\$1 million                 | 2                       | 83               | <1                    | 3                |
| \$1 million – \$10 million   | 6                       | 14               | <1                    | 4                |
| \$10 million – \$25 million  | 3                       | 1                | <1                    | 4                |
| \$25 million – \$100 million | 5                       | 1                | <1                    | 14               |
| \$100 million – \$1 billion  | 16                      | <1               | 1                     | 32               |
| \$1 billion – \$100 billion  | 60                      | <1               | 55                    | 39               |
| >\$100 billion               | 8                       | <1               | 43                    | 3                |

|                      | <b>All corporations</b> |                  | <b>NMTC claimants</b> |                  |
|----------------------|-------------------------|------------------|-----------------------|------------------|
|                      | <b>Income (%)</b>       | <b>Firms (%)</b> | <b>Income (%)</b>     | <b>Firms (%)</b> |
| Services             | 14                      | 34               | 1                     | 2                |
| Financial            | 44                      | 7                | 72                    | 83               |
| Manufacturing        | 15                      | 6                | 12                    | 3                |
| Real estate          | 2                       | 11               | <1                    | 2                |
| Retail and wholesale | 9                       | 18               | 3                     | 2                |
| Other                | 15                      | 25               | 10                    | 7                |

The table above compares corporate filers with new market tax claimants using corporate tax data from the IRS statistics of income files, as described in Section 3. The data are based on Form 1120 and Form 3800 from 2003 to 2018. Panel A displays mean characteristics in thousands of 2020 dollars. For 2018, Gross Receipts are line 1a on Form 1120. Taxable Income is line 30 on Form 1120. Taxes paid is line 31 on Form 1120. Total Assets is from line 15d on Form 1120 Schedule L. NMTC claims are found on line 1i on Form 3800 Part III. Panel B displays the share of income and share of firms by Total Income (line 11 on Form 1120 in 2018). Panel C provides the share of income and share of firms by industry. Firms are classified according to their major NAICS industry codes.

For NMTC claimants, the distribution of income is even more greatly skewed, with approximately 98% of income reported by firms with over \$1 billion in annual income. Panel C displays the share of income and share of firms distributed across industries. NMTC claimants are concentrated in Financial services, with 72% of NMTC claimant income and 83% of NMTC-claiming firms being classified as Financial.

## 4 Project Characteristics

The selection and location of place-based policies provides both an appeal to policy makers and a challenge to researchers. Understanding the characteristics of past NMTC investments and how those characteristics have changed over time is valuable for evaluating and researching the effectiveness of the program. The NMTC program has evolved considerably since its inception and often in response to specific criticisms about the types of investment and location of the investment.

NMTC investments have and continue to be widely distributed geographically. Between 2003 and 2019, the NMTC authorized investments for over 6800 projects which span all 50 states and DC. Figure 2 displays investment per eligible population in tracts where investments have been made.<sup>5</sup> States vary substantially in how much NMTC investment per eligible population they have received. Figure 3 displays how the total investment in different geographic regions have changed over time.<sup>6</sup> While regional investment has been fairly steady, the South, and to a lesser extent the Midwest, have received a growing share of investment while the share of NMTC investment in the Northeast has declined.

Early criticism of the NMTC program focused on the large share of investment in metropolitan areas. In the Tax Relief and Health Care Act of 2006 (P.L. 109–432), Congress required the NMTC be allocated so non-metropolitan areas receive a proportional amount of investment allocation. Figure 4 displays the share of investment (QLICI) in metropolitan areas. Consistent with the regulatory requirement, by 2008 CDFI had substantially lowered the metropolitan share. Today the metropolitan share of investment is less than 75% of total investment, a decline of over 20 percentage points from the early years of the program. Figure 5 displays the share of investment in Real Estate since the program's inception. Although not specified by the 2006 act, concurrent with the fall in metropolitan investment, the share of investment in real estate projects has declined. During the early years of the program, nearly 70% of investment was made in real estate projects but by 2019, investment in real estate projects had declined to approximately 32%. Projects often utilize NMTC investment to obtain more advantageous real estate financing and even projects classified as real estate may serve communities in a variety of ways. For a more complete description of NMTC project type and city-level data see Abravanel et al. (2013), Theodos et al. (2021b), and Theodos et al. (2021a).

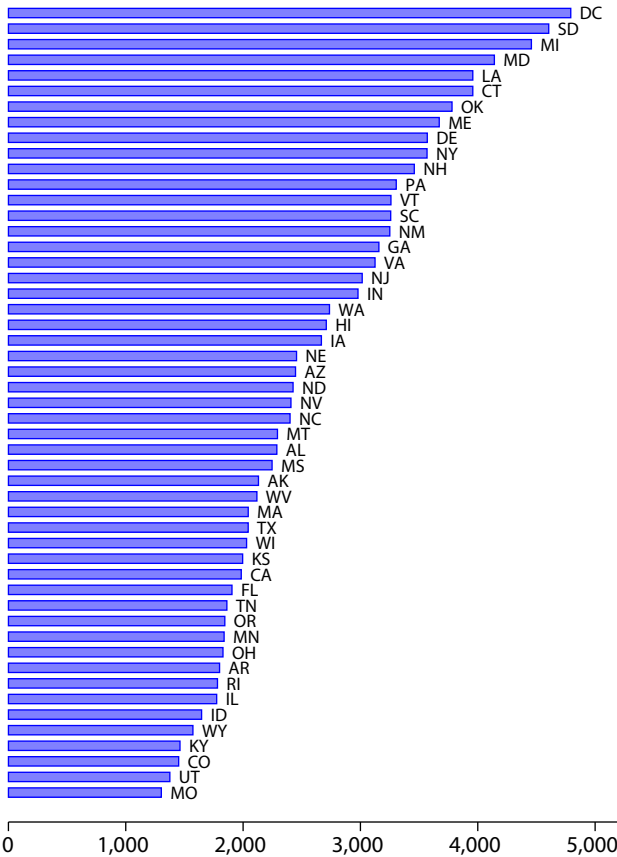
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<sup>5</sup> Investment per eligible population is defined as the total Qualified Low-Income Community Investment (QLICI) investment in the state divided by the total population in census tracts where investments were made.

<sup>6</sup> I use geographic regions as defined by the U.S. Census Bureau.



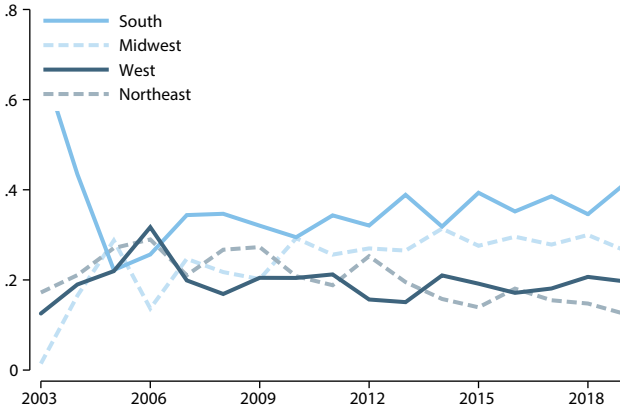
### Investment Per Eligible Population



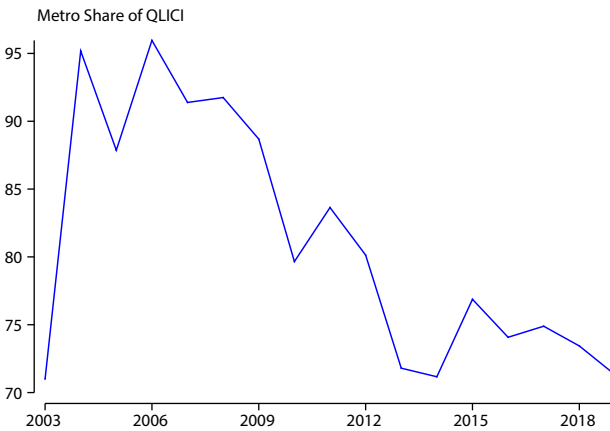
**Figure 2:** Investment per eligible population. The figure above displays investment per eligible population. Investment per eligible population is defined as the total Qualified Low-Income Community Investment (QLIC) investment in the state divided by the total population in census tracts where investments were made.

## 5 Claimant Characteristics

The structure of the NMTC program provides incentives for investment in low-income census tracts. Through their investment in CDEs, NMTC claimants provide the financial capital the program attempts to redirect towards impoverished places. It is worth examining who claims the tax credits for at least two reasons. First, a primary concern about place-based programs is that the financial capital they

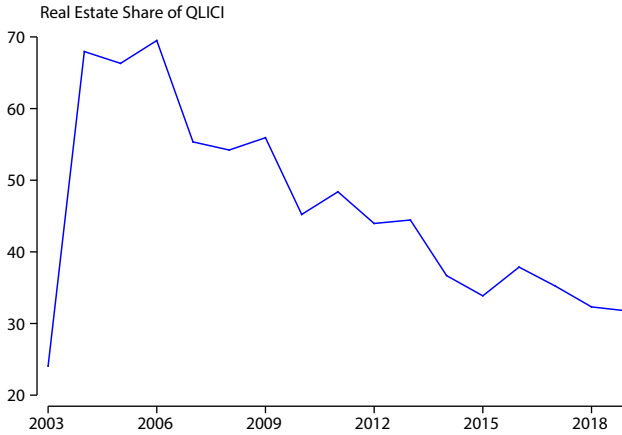


**Figure 3:** Regional shares of investment. The figure above illustrates the regional share of NMTC investment for 2003 to 2019 using data from the Community Development Financial Institutions (CDFI) Fund. NMTC investment is defined as Qualified Low-Income Community Investment as reported by CDFI. Regions are defined according to the U.S. Census Bureau definitions.



**Figure 4:** Metro Areas Share of Investment. The figure above illustrates the metropolitan share of NMTC investment for 2003 to 2019 using data from the Community Development Financial Institutions (CDFI) Fund. NMTC investment is defined as Qualified Low-Income Community Investment. Census tracts are classified as metropolitan if they are part of a metropolitan county, as defined by the Office of Management and Budget.

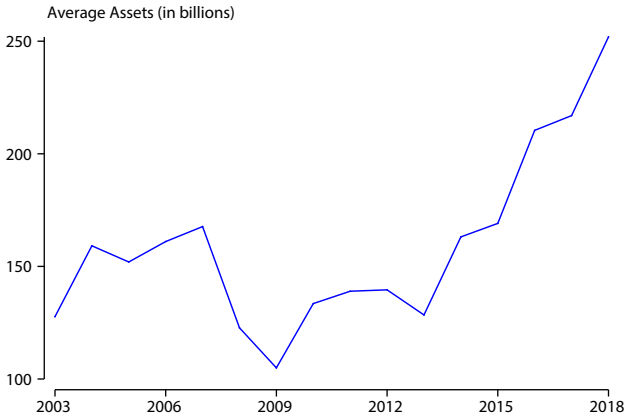
attract is simply redirected from other investments. Although this paper makes no claims about where NMTC investments would have gone otherwise, a necessary step to understanding the potential trade offs is understanding the source of the



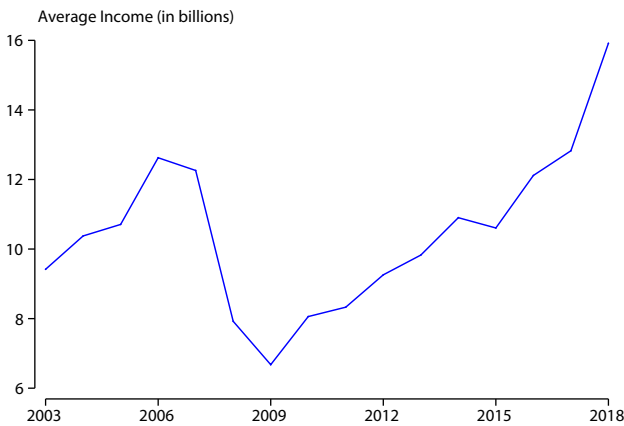
**Figure 5:** Real estate share of investment. The figure above illustrates the real estate share of NMTC investment for 2003 to 2019 using data from the Community Development Financial Institutions (CDFI) Fund. NMTC investment is defined as Qualified Low-Income Community Investment. CDFI reports investments as either real estate, non-real estate, or investments in other CDEs.

financial capital. Second, credits such as the NMTC are known as General Business Credits (GBCs). A firm only uses a GBC they qualify for when they have positive tax liability. Moreover, GBCs can be carried forward up to 20 years to offset future tax liability. Other GBCs include credits related to research and development, renewable energy, certain oil and natural gas activities, low-income housing, and many other activities. Census tracts eligible for NMTC investment are often eligible for other place-based policies. It is beyond the scope of this paper to comprehensively examine interactions between GBCs but Konda et al. (2020) offer a broader discussion of GBCs and how their outstanding stock impacts utilization. When a firm chooses to qualify and utilize NMTCs they are inherently trading off between other investment opportunities and other credits potentially available to them. To better understand the relative value of different GBCs, it is valuable to understand the characteristics of firms utilizing the NMTC.

Figures 6 and 7 expand on the characteristics highlighted in Table 2 by displaying how claimant's reported assets and income have changed since the program's inception. All figures are shown in inflation-adjusted terms using 2020 dollars. Assets and income of claimants follow a similar pattern throughout the period, with each experiencing substantial increases since 2009. In 2018, NMTC claimants reported average assets of approximately \$244 billion and over \$15 billion in total income.

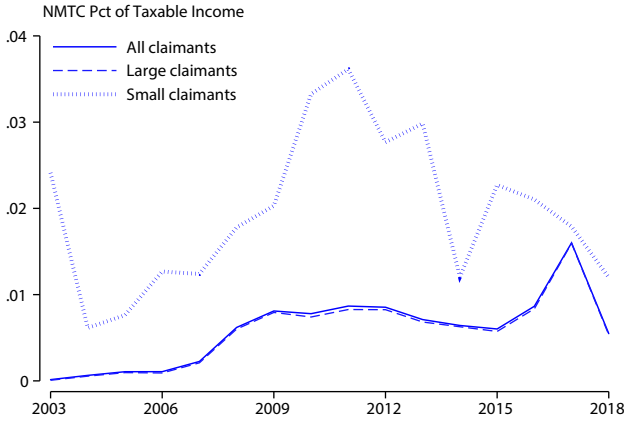


**Figure 6:** NMTC claimants assets. The figure above graphs the average amount of total assets reported on Form 1120 for the years 2003–2018 by corporations who claim the New Market Tax Credit on Form 3800. Values are calculated using corporate tax data from the IRS Statistics of Income files, as described in Section 3.



**Figure 7:** NMTC claimants income. The figure above graphs the average amount of total income reported on Form 1120 for the years 2003–2018 by corporations who claim the New Market Tax Credit on Form 3800. Values are calculated using corporate tax data from the IRS Statistics of Income files, as described in Section 3.

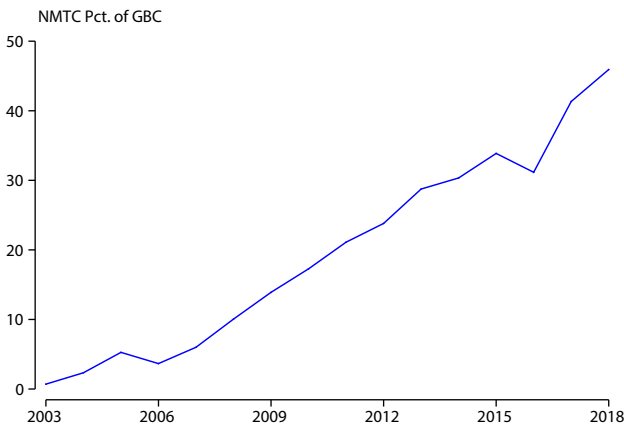
The NMTC has consistently been a greater percentage of income for smaller claimants. Figure 8 graphs the total share of taxable income (solid line) as well as the percentage of taxable income for small (dotted line) and large (dashed line) claimants. A firm is classified as a large claimant if it has assets greater than the median-sized claimant while small claimants are those with assets less than the



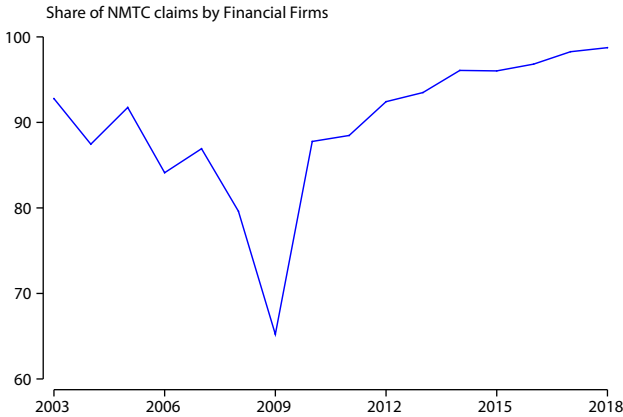
**Figure 8:** NMTC Pct. of taxable income. The figure above displays the New Market Tax Credit share of taxable income for NMTC claimants overall (solid line) and broken into large and small claimants. Large claimants (dashed line) are those with assets greater than the median. Small claimants (dotted line) are those with assets less than the median. Values are calculated using corporate tax data from the IRS Statistics of Income files, as described in Section 3.

median-sized claimant. Consistent with their volume of credits, large claimants’ largely track with total share, whereas NMTCs are a larger share of taxable income for small claimants throughout the sample period.

Figure 9 displays the NMTC share of total reported GBCs for NMTC claimants. Initially NMTCs served as a small fraction of the GBCs reported by claimants and



**Figure 9:** Pct. of GBCs for NMTC claimants. The figure above displays the share of General Business Credits that were New Market Tax Credits for NMTC claimants. Values are calculated using corporate tax data from the IRS Statistics of Income files, as described in Section 3.



**Figure 10:** Pct. of NMTCs for financial firms. The figure above displays the share of New Market Tax Credits which were claimed by financial firms. Values are calculated using corporate tax data from the IRS Statistics of Income files, as described in Section 3.

were less than 6% of claimant’s total GBCs. By 2019, the NMTC had grown to approximately 45% of GBCs for NMTC claimants. The NMTC increased share of GBCs for claimants may be due to either a change in the relative value of the credit or because the composition of claimants has changed.

Financial firms have historically claimed the vast majority of credits. Figure 10 graphs the share of New Market Tax Credits claimed by financial firms since 2003. Financial firms’ claimed a smaller share of NMTCs during and after the 2007–2008 recession as their tax liability declined. Since then, and consistent with their ability to carry credits forward, financial firms have claimed a higher percentage of NMTCs.

## 6 Regression Analysis

### 6.1 Tract Selection

To better understand which tracts receive NMTC investment, I use a logit model to quantify the change in marginal probability a census tract  $c$  receives any NMTC investment at time  $t$ , denoted by  $N_{ct} = 1$ , conditional on the included  $k$  regressors. An analogous exercise would be to use a linear probability model, which yields similar results qualitatively. I opt to use a logit model to correct for censoring of unselected tracts and in order to restrict predicted probabilities to a zero-one interval. Specifically, I model

$$P(N_{ct} = 1 | x_1, \dots, x_k) = f(x_1, \dots, x_k)$$

where

$$f(x_1, \dots, x_k) = \frac{e^{\beta_0 + \beta_1 x_1 + \dots + \beta_k x_k}}{1 + e^{\beta_0 + \beta_1 x_1 + \dots + \beta_k x_k}}$$

The dependent variable  $N_{ct}$  equals one if the tract received NMTC investment during time period  $t$ , defined as an ACS five-year window. I include as regressors indicators for the various criteria by which a tract may qualify to be eligible for NMTC investment. *LIC Poverty* equals one if the tract has a poverty rate of at least 20%. *LIC Income* equals one if a tract has a median family income below 80% of the statewide family income, or if the tract is in an MSA, has a median family income below 80% of the metropolitan area median income. I also include *LIC Unemployment* as an indicator of extreme distress, which equals one if the unemployment rate is at least 1.5 times the national average. From the 2006–2010 and 2011–2015 waves of the American Community Survey, I include the underlying continuous variables for the indicators above, *Poverty Rate*, *Pct of Median Income*, and *Unemployment Rate*. *Metro* is an indicator which equals one if the tract is in a county OMB has designated as metropolitan. Finally, *Population* is the log of tract population.<sup>7</sup>

I report results from the logit model in Table 3. Column (1) provides the estimated coefficients for the model without any fixed effects, column (3) reports the coefficients for the model using state-time fixed effects, and column (5) reports the coefficients using tract fixed effects. The specification with state-time fixed effects uses variation within states at a single point in time. The specification using tract fixed effects utilizes variation within a tract across time. The coefficients themselves are not easily interpretable. In columns (2), (4), and (6), I report the mean marginal effects. In general, the marginal effects are larger in magnitude for the model with state fixed effects relative to the model without fixed effects, i.e. column (4) is larger than column (2), although they are not always statistically different. The signs of the marginal effects are equivalent for the model without fixed effects and with state fixed effects.

Without fixed effects or with state fixed effects, the factors associated with the largest increase in the observed probability a tract receives any NMTC investment is its qualification under either the poverty or income criteria, which, conditional on the state, increase the probability a tract received NMTC by 14 and 15 percentage points respectively. Consistent with the objective to direct NMTC resources to the

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<sup>7</sup> I use ACS five-year periods to match the economic variables observable to the CDFI Fund at the time projects are awarded. Results are qualitatively similar if I drop early years of the program when CDFI utilized 2000 decennial census data to determine eligibility.

Table 3: Tract selection.

|                       | (1)<br>NMTC<br>Indicator | (2)<br>Marginal<br>Effects | (3)<br>NMTC<br>Indicator | (4)<br>Marginal<br>Effects | (5)<br>NMTC<br>Indicator | (6)<br>Marginal<br>Effects |
|-----------------------|--------------------------|----------------------------|--------------------------|----------------------------|--------------------------|----------------------------|
| LIC poverty           | 0.83***<br>(0.06)        | 0.02***<br>(0.00)          | 0.85***<br>(0.12)        | 0.14***<br>(0.02)          | 0.25*<br>(0.13)          | 0.05*<br>(0.03)            |
| LIC income            | 0.79***<br>(0.06)        | 0.02***<br>(0.00)          | 0.89***<br>(0.13)        | 0.15***<br>(0.03)          | 0.12<br>(0.16)           | 0.02<br>(0.03)             |
| LIC unemployment      | 0.12**<br>(0.05)         | 0.00**<br>(0.00)           | 0.14**<br>(0.06)         | 0.02**<br>(0.01)           | -0.13<br>(0.10)          | -0.02<br>(0.02)            |
| Metro                 | -0.36***<br>(0.04)       | -0.01***<br>(0.00)         | -0.26**<br>(0.11)        | -0.04**<br>(0.02)          | -0.70***<br>(0.22)       | -0.14***<br>(0.05)         |
| Poverty rate          | 0.25***<br>(0.02)        | 0.01***<br>(0.00)          | 0.34***<br>(0.03)        | 0.06***<br>(0.01)          | -0.20***<br>(0.06)       | -0.04***<br>(0.01)         |
| Pct. of median income | -1.41***<br>(0.04)       | -0.04***<br>(0.00)         | -0.20*<br>(0.11)         | -0.03*<br>(0.02)           | -1.65***<br>(0.05)       | -0.32***<br>(0.05)         |
| Unemployment rate     | 0.00<br>(0.02)           | 0.00<br>(0.00)             | 0.03<br>(0.03)           | 0.00<br>(0.00)             | 0.13***<br>(0.04)        | 0.03***<br>(0.01)          |
| Population            | -0.20***<br>(0.03)       | -0.01***<br>(0.00)         | -0.16***<br>(0.04)       | -0.03***<br>(0.00)         | -0.07<br>(0.20)          | -0.01<br>(0.04)            |
| State-time FE         | No                       | No                         | Yes                      | Yes                        | No                       | No                         |
| Tract FE              | No                       | No                         | No                       | No                         | Yes                      | Yes                        |
| Observations          | 143,651                  | 143,651                    | 143,272                  | 143,272                    | 7412                     | 7412                       |

This table reports coefficients from the logit model as described in Section 6.1. Observations are at the census tract level. The dependent variable is an indicator if a tract received NMTC investment. Heteroskedasticity-robust standard errors are in parentheses. *LIC Poverty*, *LIC Income*, and *LIC Unemployment* are indicators if tracts meet qualifying economic conditions. *Metro* is an indicator equal to one if the tract is in a county OMB has designated as metropolitan. *Poverty Rate*, *Pct of Median Income*, and *Unemployment Rate* are tract level measures of economic conditions taken from the 2006–2010 and 2011–2015 American Community Survey waves. They are rescaled so a one unit increase corresponds to one standard deviation increase in the measure. *Population* is the log of tract population.

most distressed communities, tracts with especially high unemployment, as captured by *LIC Unemployment*, are two percentage points more likely to have received NMTC investment. Consistent with Figure 4, tracts which are in metropolitan counties are one to four percentage points less likely to have received NMTC investment conditional on the included regressors. Similarly, larger populations decrease the likelihood of NMTC investment. To aid in interpretation, I rescaled *Poverty Rate*, *Pct of Median Income*, and *Unemployment Rate* so a one unit change corresponds to a standard deviation increase in the underlying variable. A one unit change thus corresponds to an increase of 12.5 percentage points in *Poverty Rate*, an increase of 56.2 percentage points in *Pct of Median Income*, and an increase of 5.7 percentage points in *Unemployment Rate*. Thus, all resulting



correlations should be interpreted from relatively large changes in economic conditions. Also consistent with the CDFI's directive to direct NMTC resources to the most distressed communities, as economic conditions worsen (i.e., increases in the poverty rate or decreases in the percentage of median income), then a tract has an increased likelihood of receiving NMTC investment. This relationship appears to be weaker for *Unemployment Rate*. One possibility is that conditional on the other variables, unemployment rate may be proxying for a lack of available investments in those tracts or be capturing selection of tracts by investors conditional on qualification.

With tract fixed effects, all indicators capturing whether tracts are eligible for NMTC investment are insignificant. These are statistically identified from within-tract variation over time and thus tracts which had a change in the NMTC investment indicator. In recent rounds of NMTC funding, CDFI has prioritized investment in the most economically distressed areas. Thus there may be few tracts on the margin of qualification which also receive NMTC investment. Conditional on qualification, with tract fixed effects the model shows a decreased probability of investment for metropolitan tracts. Consistent with targeting investment towards more impoverished areas, increases in *Pct. of Medium Income* are correlated with a lower probability of investment and increases in *Unemployment rate* are correlated a greater probability of investment. However, an increase in *Poverty Rate* is correlated with a decreased probability of investment.

## 6.2 Investment

In Table 4 I present OLS regression results examining how investment has been allocated among tracts conditional on their receiving NMTC investment in a time period. I view the results as providing correlations between key economic measures and NMTC investment. As regressors, I include *Metro*, *Poverty Rate*, *Pct of Median Income*, *Unemployment Rate*, and *Population*. The variable definitions are unchanged from Section 6.1. The dependent variable is average annual NMTC investment in a tract during  $t$ . Column (1) displays results without fixed effects. Column (2) includes state fixed effects. Column (3) includes tract fixed effects. The model with tract fixed effects is only identified by tracts which received NMTC investment during multiple periods and has larger standard errors. Thus, none of the included regressors are statistically significant. In comparing the results in columns (1) and (2), consistent with targeting NMTC investment to the most distressed areas, a standard deviation or one unit increase in *Poverty Rate*, holding constant the other included regressors, is associated with an increase on average in NMTC investment of \$445–505 thousand. Improving income conditions, as

**Table 4:** Investment.

|                       | (1)<br>Investment       | (2)<br>Investment       | (3)<br>Investment     |
|-----------------------|-------------------------|-------------------------|-----------------------|
| Metro                 | -1413.41***<br>(418.33) | -1690.06***<br>(460.70) |                       |
| Poverty rate          | 434.92**<br>(175.49)    | 493.75***<br>(174.44)   | 725.63<br>(1732.46)   |
| Pct. of median income | -651.31**<br>(296.41)   | 1237.47**<br>(618.99)   | -1080.15<br>(1191.16) |
| Unemployment rate     | -227.67*<br>(136.98)    | -153.99<br>(145.44)     | -178.00<br>(1144.94)  |
| Population            | -398.91<br>(287.47)     | -495.43*<br>(273.70)    | 919.32<br>(5688.48)   |
| State-time FE         | No                      | Yes                     | No                    |
| Tract FE              | No                      | No                      | Yes                   |
| Observations          | 4440                    | 4440                    | 4440                  |

This table reports coefficients for OLS regressions as described in Section 6.2. Observations are at the census tract level conditional on receiving NMTC investment. The dependent variable is average annual NMTC investment. Heteroskedasticity-robust standard errors are in parentheses. *Metro* is an indicator equal to one if the tract is in a county OMB has designated as metropolitan. *Poverty Rate*, *Pct of Median Income*, and *Unemployment Rate* are tract level measures of economic conditions taken from the 2006–2010 and 2011–2015 American Community Survey waves. They are rescaled so a one unit increase corresponds to one standard deviation increase in the measure. *Population* is the log of tract population.

captured by *Pct. of Median Income*, are conflicting in sign. Changes in unemployment conditions and population, as captured by *Unemployment Rate* and *Population*, do not appear to be strongly correlated with NMTC investment. Conditional on receiving investment in a given year, tracts on average receive approximately \$8.7 million in investment, with the median tract receiving \$6 million in investment. Approximately 25% of tracts receive more than \$12 million and 25% receive less than \$1.5 million.

## 7 Conclusion

The NMTC has changed considerably since the program began both in terms of investments and how the credit is used. Projects have shifted to be less metropolitan and are less likely to be classified as Real Estate. Geographically, NMTC investments continue to be made in all 50 states with a slightly larger share of investments in the South and Midwest. Corporations with assets and incomes substantially higher than the average corporation continue to be most likely to

claim the credit. Partially a reflection of broader macroeconomic improvements, average assets and income for claimants has grown considerably since 2009.

The cross-sectional state fixed effect regressions in Section 6.1 provide evidence worse economic conditions, and especially a worse poverty rate, lead to a higher probability of receiving NMTC investment. This is true even after controlling for satisfying the threshold conditions necessary for qualification. The correlation however is not present in regressions utilizing variation across time. More generally, it is less clear how tightly correlated economic conditions are with the amount of NMTC investment a tract receives. The results should help put to rest the concern projects are overly concentrated in urban or metropolitan areas.

Place-based policies remain a popular policy worthy of further study. This paper focused on correlations of characteristics explicitly considered by CDFI. These can help inform modeling choices on the selection process and the levels of observed investment. This paper has not addressed factors which are unobservable to CDFI but may be observed by program participants. Understanding the extent to which investments are targeted according to these unobservables is an important next step for research on both program design and understanding the effectiveness of place-based policies. Substantial work remains on credibly identifying effects on residents and non-residents, spillovers to non-selected geographies, and disentangling underlying mechanisms. Progress on any of these topics would be valuable, especially given the continued and widespread use of place-based policies.

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