What Matters More for Economic Development, the Amount of Funding or the Number of Projects Funded? Evidence from the Community Development Financial Investment Fund

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Abstract

Governments try to attract entrepreneurs to specific areas by providing incentives to new businesses that locate within their jurisdiction. However, there is a debate over how best to allocate these funds. Using establishment-level data from the National Establishment Time Series (NETS) database for California, and data on the location of disbursements from the Community Development Financial Institutions (CDFI) and New Market Tax Credit (NMTC) programs, we consider the effectiveness of these two programs in attracting new businesses to disadvantaged areas. Investors are eligible to receive funding through these programs if the census tract where they are located has a median family income less than or equal to 80% of the state's median family income. Using this plausibly exogenous eligibility threshold, we find that higher levels of funding per project through the NMTC program result in an increase in the number of new establishments in that area. However, we find that the number of NMTC projects funded has no effect on attracting new firms to eligible tracts, and there is little evidence of a consistent effect of the CDFI program. The amounts of funding through the CDFI program are relatively small, though more projects were funded through this program than the NMTC. Thus, our findings suggest that the amount of funding allocated to these areas matters more for economic development than does the number of projects funded. In addition, we find that there are heterogenous effects with regard to the impact of these programs, specifically across different firm sizes and industries, suggesting that these policies may cause firms to reallocate and sort across census tracts.

I. Introduction

Entrepreneurship is an important driver of growth for local communities. In 2005, approximately 3.5 million new jobs were created by new businesses (Haltiwanger et al, 2013). Given how important entrepreneurship is for economic growth, all levels of government pursue policies with the hope that these initiatives will attract new businesses to help struggling regions.[1] However, due to the scarcity of government resources, it is important to understand the effectiveness of different types of policies in order to determine which programs are most successful at driving growth. In addition, it is possible that these programs have unintended consequences, causing a sorting of different types of firms across areas. In this paper, we focus on two federal government programs – the New Markets Tax Credit (NMTC) and the Community Development Financial Institutions (CDFI) program – to estimate the ability of these programs to attract new businesses to distressed communities in California. We also consider how the effect of these policies may vary, possibly having different effects on firms of various sizes or from different industrial sectors.

Both the NMTC and the CDFI programs are operated through the Community Development Financial Institutions (CDFI) Fund, an organization within the US Treasury Department that focuses on improving economic conditions in distressed communities. However, the two programs use fundamentally different approaches to allocate aid to struggling communities. First, the CDFI program provides funding to financial institutions through various subsidy programs, while the NMTC is a tax credit allocated to individual investors. In addition, while fewer projects receive aid through the NMTC than the CDFI program, the typical funding amount received through the NMTC program is higher than through the CDFI. Therefore, by

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[1] This idea is known as "economic gardening," as it is believed that by drawing a few new businesses to an area these establishments will drive future growth in the area (Neumark et al., 2007).

examining both programs we can compare the impact of two different approaches to attracting businesses to struggling communities, as well as the impact on businesses of different sizes and in different industrial sectors.

Although the CDFI Fund has been in existence since 1994, limited research has examined the effects of its programs on business activity. Freedman (2015) and Harger and Ross (2015) examined the effect of eligibility for the NMTC program on determining where businesses locate, finding important differences across industries. Gurly-Calvez et al. (2009) examined the impact of the NMTC on investment, finding evidence that the program was simply reallocating where investments were made versus stimulating new investment. Freedman (2012) found some evidence of a positive impact of the NMTC on the communities that were eligible for the NMTCs. However, to our knowledge no academic research has considered the impact of the CDFI program, nor does there appear to be any research comparing the two programs and their different approaches.

To conduct our analysis, we draw upon two unique data sets on business activity and funding through the NMTC and CDFI programs in California. Our data on business activity is obtained from the National Establishments Time Series (NETS) database for the state of California. The NETS database is a panel data set that tracks establishments over time (Kolko and Neumark, 2008 and 2010; Kolko, 2012). We also obtained confidential data from the CDFI Fund on the specific location where each NMTC and CDFI program tax credit or subsidy was allocated. This allows us to determine the effect of investment through these two programs on business activity in eligible census tracts, both in terms of the number of investments made and the amount of funds invested per project.

We find that the average amount of funding per project received through the NMTC has a positive effect on the number of new businesses that locate in eligible communities. However, we find no statistically significant effect of the number of NMTC projects funded on the number of new businesses in a tract, suggesting that it is the amount of NMTC funding allocated to an area that affects growth, rather than the number of NMTC projects funded. We find weak evidence of any effect of the CDFI program on new business activity. Due to the fact that amount of the awards under the CDFI program are usually small but more projects receive funding, the lack of a significant effect of the CDFI program suggests that it is the per-project amount of funding that matters when aiding struggling communities, not the number of projects supported. Alternatively, because the CDFI program is a subsidy program, versus the NMTC program which is a tax credit, it is also possible that this policy difference affects the effectiveness of the program to attract new businesses to the area.

Next, we look at whether these programs have offsetting effects across industries, specifically the size and industry of the firm.[2] We find that more funding per project through the NMTC program attracts more new firms in retail, information services, financial, insurance and real estate (FIRE), professional services, information services, and arts and food services. However, we find decreases in the number of new firms in the wholesale industry. Furthermore, we find that those industries that are attracted to these areas tend to be smaller. This suggests that the program is not only causing a sorting across the size of firms that are attracted to an area, but also that there is a sorting across industries, consistent with existing research on the program (Harger and Ross, 2015; Freedmand, 2015). For the CDFI program, we continue to find no consistent pattern of an effect the program on new business activity.

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[2] A growing literature is considering these heterogeneous effects across industries, including Hanson and Rohlin (2011), Harger and Ross (2015), and Patrick (2015).

Our results suggest that policy makers need to carefully consider the effectiveness of the programs and funding sources they pursue, given the limited amount of government funds available. If the funding levels of these programs are not large enough to stimulate growth, then the government should consider either investing more in this program or moving funds towards alternative programs. While we do find positive effects of funding through the NMTC program on the overall number of new businesses in an area, there is evidence that it may be causing a sorting of industries by size and by industry, which could have important implications for the growth in an area. In addition to the differences in the per-project dollar amounts through these programs, the programs use different delivery mechanism – subsidies (CDFI) versus tax credits (NMTC) – that could also impact the effectiveness of the programs. Policy makers should be cognizant of these differences and provide appropriate incentives to businesses depending on their goals.

The rest of the paper will proceed as follows. In Section II we provide background information on both programs, as well as a discussion of the related literature. In Section III we discuss our data, and outline our empirical strategy in Section IV. Results are presented in Section V. We conclude and discuss policy implications in Section VI.

II. Background Information

A. Program Description

Community Development Financial Institutions (CDFI) Fund

The Community Development Financial Institutions (CDFI) Fund is managed by the U.S. Department of the Treasury and was established in 1994 as part of the Riegle Community Development and Regulatory Improvement Act. The goal of the CDFI Fund is to increase

economic empowerment and opportunity in distressed communities across the U.S. In order to

achieve this goal, the CDFI Fund manages seven programs designed to provide funding to

financial organizations serving distressed areas. The three main programs managed by the CDFI

Fund are the CDFI program, the New Markets Tax Credit (NMTC) program, and the Bank

Enterprise Award (BEA) program.[3] In this paper, we focus on the NMTC and the CDFI

programs, as the BEA program has different goals and aims, particularly related to financial

institutions and their lending activities.[4]

      The CDFI Fund certifies organizations as Community Development Financial Institutions

(CDFIs) if the organization is a private legal financing entity at the time of application and has

the primary goal of promoting community development in at least one specific market. The

entity is required to have accountability within the community of their target market and must

provide development services in addition to financing activities. Some examples of development

services include financial literacy and education and training on microenterprise management

and development.[5] In practice, CDFIs are typically community development banks,

corporations, credit unions, loan funds, or venture capital funds. CDFIs are certified for three-

year periods after which they are required to reapply.

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[3] The CDFI fund also manages four other small programs. The CDFI Bond Guarantee program guarantees all notes
or bonds issued in support of CDFIs. The Capital Magnet Fund (CMF) provides grants to CDFIs as well as
nonprofit housing agencies. The CDFI fund also manages the Native Initiatives program, which is designed to
increase credit and capital availability to Native Communities within the US. Finally, the Financial Education and
Counseling (FEC) Pilot Program provides grants to organizations willing to provide financial education and
counseling services to homebuyers.

[4] The BEA program offers awards to financial institutions for making investments in distressed communities across
the country. The program was designed to incentivize increases in qualified financial services located within
economically distressed communities. Qualified activities are separated into three sections: CDFI related activities,
distressed community financing activities, and service activities. CDFI related activities include equity investments,
equity-like loans, and CDFI support activities such as loans, technical assistance, or qualifying deposits. Distressed
community financing activities include the following types of financing and make up the second BEA priority tier:
affordable housing loans, affordable housing development loans and related project investments, education loans,
commercial real estate loans and related project investments, home improvement loans, small dollar consumer loans,
and small business loans and related project investments. The service activities section of qualifying activities
includes deposit liability, financial services, community services, targeted financial services, and targeted retail
savings/investment products.

[5] For more detail on CDFIs, see https://portal.hud.gov/hudportal/documents/huddoc?id=19564_Guide_Section2.pdf.

CDFI Program

The CDFI program began in 1994 and is one of the primary ways the CDFI Fund works to aid

distressed communities. For a census tract to be eligible to receive funding through the CDFI

program, it must meet one of the following criteria, (1) the tract poverty rate is at least 20%; (2)

the tract unemployment rate is 1.5 times the national average; (3) metropolitan area tracts have a

median family income (MFI) at or below 80% of the MSA or national MSA MFI, whichever is

higher, for non-metropolitan area tracts the MFI must be at or below 80% of the statewide or

national non-metropolitan area MFI, whichever is higher; (4) the tract is wholly located in an

Enterprise Zone or Enterprise Community; or (5) metropolitan area tracts that have a county

population loss greater than or equal to 10% between the two most recent census tracts and in

non-metropolitan tracts that have county population loss greater than or equal to 5% over the last

five years. Of all tracts eligible to receive funding through the CDFI program within California,

roughly 80% qualify for aid based on the third criteria listed above, which we will refer to from

now on as the income eligibility criteria.[6]

CDFIs are eligible to receive monetary awards to be used towards financial assistance or

technical assistance. Financial assistance awards are made to a certified CDFI for use towards

financing capital, loan loss reserves, capital reserves, or operations. Any CDFI that receives

funding is required to match the awarded funding amount at a one to one rate or higher.

However, larger CDFIs are expected to exceed this match rate and serve more targeted markets.

Financial assistance awards are capped at $2 million per applicant.

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[6] See https://www.cdfifund.gov/Lists/CDFI%20News/DispForm.aspx?ID=168 for more information on which
specific census tracts qualify for the CDFI program

Technical assistance grants are awarded to CDFIs needing funds for finance consulting services, staff salaries in order to build organizational capacity, acquiring technology items, or acquiring training for staff or management. Ongoing operational expenses are ineligible for technical assistance funding under the CDFI program. Non-certified CDFIs can apply for technical assistance awards but must become certified within two years after receiving an award. Technical assistance awards are capped at $125,000.

The unique nature of our data allows us to separate the funds allocated through the CDFI program into its subcomponents. Therefore, we are able to separate funding given to projects for business purposes from funding provided for other programs, such as to improve housing structures. This allows us to determine the effect of programs intended for business purposes, versus confounding our results by including other funding opportunities.

New Markets Tax Credit Program

The New Markets Tax Credit Program (NMTC) began in 2000 as part of the Community Renewal Tax Relief Act and has been renewed annually since its implementation. Although legislation designed the program in 2000, applications were not accepted until late 2002 and the first tax credit allocations were not made until 2003. The goal of the NMTC program is to mitigate some of the risk to investing in a low-income community by offering a federal income tax credit of up to 39% of the investment amount.

The CDFI Fund administers the NMTC tax credit allocations to qualified Community Development Entities (CDEs). CDEs are domestic partnerships or corporations, which help low-income communities gain access to economic investment and capital. A partnership or corporation must apply for certification as a CDE from the CDFI fund. In order to qualify as a

CDE, the primary focus of the business must be to increase investment in the community in which they serve. At least 60% of the organization's financial activity must be directed towards this goal, and CDEs must maintain community membership on advisory boards within their firm.

Once a CDE receives a tax credit allocation from the CDFI Fund, they find private investors willing to make investments in eligible low-income communities in exchange for the tax credit. A census tract is an eligible low-income community under the NMTC program if the ratio of the tract's MFI to the larger of the state or MSA MFI, is less than or equal to 80%. Census tracts are also eligible for NMTC investment if their poverty rate is greater than 20%.[7]

B. Previous Research

Local Economic Development Policy and Business Location

State and local policy makers strive to attract new businesses, as these establishments are crucial drivers of growth for the U.S. economy. In 2005, approximately 3.5 million new jobs were created by new businesses, dramatically more than any other firm-age category (Haltiwanger et al., 2013). In order to help lagging areas, policy makers at all levels of government enact legislation that incentivizes new businesses to open in these struggling areas. This idea, known as "economic gardening," is emphasized by Neumark et al. (2007) who stated that "new firms contribute substantially to job creation."[8]

However, there are questions regarding the best way to set up incentives to attract new businesses to an area. Some argue that location-based programs are the optimal policy to

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[7] A tract can be eligible for the NMTC based on either the eligibility ratio or the poverty rate in the tract. However, few tracts qualify based on the poverty criterion alone. Freedman (2012) showed that approximately 70% of tracts that have a poverty rate between 15-20% qualify for the NMTC based on the income eligibility criterion. Therefore, since the poverty rate criterion does not appear to be the determining factor for eligibility in the NMTC, we focus on the income eligibility criterion.

[8] There is an extensive literature estimating the effect and presence of agglomeration economics and the benefits to businesses of locating in areas with a large amount of economic activity.(Arzaghi & Henderson, 2008; Duranton & Puga, 2004; Puga, 2010; Rosenthal & Strange, 2003; and Rosenthal & Strange, 2005).

incentivize businesses to locate in an area. Glaeser (2001) argues that attracting new businesses will generate economic surplus for current residents in the targeted area. Furthermore, he suggests that offering location-based tax incentives may be justified as the incentives compensate new businesses for future tax payments that will be made to the locality. This research is likely to be one of the reasons why policy makers offer location based tax incentives to attract new establishments to a jurisdiction.

Numerous papers have looked at the impact of various government policies on business location decisions. Kolko and Neumark (2008) use the National Establishment Time Series (NETS) database to track the movement of both businesses and employment into and out of California as a result of differences in state policies. Other researchers have used establishment level data to determine the impact of state tax policy on business location (Gabe & Bell, 2004; Rathelot & Sillard, 2008; Duranton, Gobillon, & Overman, 2011; Bruce & Deskins, 2012; Rohlin, Rosenthal, & Ross, 2014). Patrick (2014) created an index to capture the degree to which state constitutions are constructed in a manner that allows state governments to offer non-tax incentives to attract new businesses.[9]

CDFI Fund Programs

Despite the longevity of the CDFI program and the NMTC, little research exists examining the impacts of these programs. In fact, no academic research that we are aware of has considered the CDFI program, although that could be because of the relatively small amounts of funding provided through the program. In addition, the research related to the NMTC is limited.

Gurley-Calvez et al. (2009) analyze whether there was an increase in new investment as a result of the NMTC or if investors simply reallocated investments intended for a non-qualifying

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[9] For a recent review of the methods used in this literature, see Arauzo-Carod et al. (2010).

tract into a qualifying tract. The authors use an instrumental variables approach to determine the effect of the policy and find that some new investments come from individual filers. However, they find that corporate filings, which comprise most of the NMTC recipients in their sample, are unlikely to represent new investment.[10]

Freedman (2012) examines the impact of the NMTC on the communities that received tax credit allocations. To address the endogenous selection process, he uses the income eligibility criteria and an instrumental variables approach to determine whether the NMTC program caused improvements in the low-income communities (LICs) to which the credit was allocated. Using census tract level data to examine several neighborhood outcomes, he finds that the NMTC program had some positive impacts on eligible communities, such as reductions in the unemployment and poverty rates.

Freedman (2015) explores another avenue through which the NMTC could impact local jurisdictions – regional labor markets. Exploiting the same discontinuity in the income eligibility criteria, combined with data from the CDFI Fund and employment data from OnTheMap, Freedman (2015) examines whether NMTC eligibility affects the distribution of employment across residents of LICs. His results suggest that to the extent to which new jobs are created in these targeted communities, few go to residents of the eligible low-income communities. However, the findings do not account for the possibility of improvements in LICs as a result of the new investment through mechanisms other than direct employment effects.

Harger and Ross (2015) use the New Markets Tax Credit (NMTC) to determine the effect of a capital tax credit on where firms in different industries locate. Similar to Freedman (2012, 2015), they use a plausibly exogenous eligibility cutoff and compare census tracts that are just

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[10] Rubin & Stankiewicz (2009) and Hicks & Faulk (2012) also provide evidence that the NMTC created investment in areas that were eligible for the credit. However, their analysis did not address the endogenous selection of which investments receive the tax credit.

eligible for the NMTC to those that are just ineligible. Their findings suggest that the NMTC incentivized new businesses to locate in tracts that were eligible for the tax credit, but there were heterogeneous effects across industries.

III.   Empirical Strategy

We examine the impact of receiving funding through either the NMTC program or the CDFI program on business activity in local communities. Since businesses are profit maximizing, a business will move into an area only if that location maximizes its profits. There could be factors that make disadvantaged areas less attractive to businesses when choosing where to locate, typically resulting in fewer firms opening in these areas. The funding provided through the NMTC and CDFI programs is designed to address these disadvantages and increase the likelihood that businesses locate there by increasing the profitability of a firm that locates in an eligible area. Thus, we expect that, if the programs are effective, they will increase the profitability of firms that locate in economically-distressed locations and increase the number of businesses (new or relocating) that locate there.

To estimate the effect of the NMTC and CDFI program, we estimate the following regression:

$$y_{it} = \beta_1 NMTC_{it} + \beta_1 CDFI_{it} + \gamma_i + \delta_t + \varepsilon_{it}$$

Where y_{it} are the number of new businesses in census tract i in year t. We estimate the effect of the two programs, the NMTC and the CDFI programs, through the variables $NMTC_{it}$ and $CDFI_{it}$, respectively. We consider two different mechanisms through which the program could affect the local area. First, we consider the effect of the number of projects funded through each program. Then, we consider the effect of the amount received (per $100,000) per project funded,

as it is plausible that it is not the number of projects funded that matters but the amount of money received per project. γ_i are census tract fixed effects, to control for unobserved local attributes of the area, and δ_t are year fixed effects to control for business cycle shocks.[11] ε_{it} is an idiosyncratic error term.

One concern when estimating the impact of these programs on business location decisions is that the areas targeted for tax credit or subsidy programs tend to have lower median incomes and higher poverty rates. These areas are generally less appealing for businesses and likely have unobservable differences driving differences in new business activity. Therefore, we cannot simply compare new business outcomes in all census tracts eligible for these programs to all those that are ineligible. To avoid this problem, we restrict our sample and focus on the tracts that are close to the income eligibility cutoff ratio. In general, for the NMTC and CDFI programs, the median income of the census tract relative to the state median income must be less than or equal to 0.80. While there are other criteria on which a census tract could be eligible for one of the programs, the income eligibility constraint is typically the binding constraint for eligibility for both programs with approximately 80% of all eligible census tracts in California qualifying under that measure. Therefore, we focus on the income eligibility cutoff as the plausibly exogenous boundary for our analysis.[12]

To justify this cutoff as exogenous, we look at other socio-economic variables at this boundary, to show there is nothing unique about this cutoff other than eligibility for the programs. Figure 1a shows the average percentage of the tract that is white, Figure 1b shows the

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[11] While there are socio-economic factors that could also affect local economic activity, such as the percentage black and the educational background of the area, the census tract fixed effects capture these observable local attributes, in additional to the unobservable local characteristics, since the data available on these factors would not change during the time period we consider.

[12] See https://www.cdfifund.gov/Lists/CDFI%20News/DispForm.aspx?ID=168 for more information on the eligibility of census tracts for both the NMTC and CDFI programs

average percentage of the tract that is black, and Figure 1c shows the average percentage of the tract that is Hispanic. As we can see in these figures, there is nothing unique with regards to the racial attributes of the communities near the boundary that could be driving our results.

Figure 1d and 1e show the percentage of the tract with no high school education and the percentage of the tract with some college education, respectively. Again, we do not find evidence that there is anything unique about the 0.80 cutoff in terms of educational attributes of the tracts. Finally, Figure 1f shows the number of existing businesses in the tract, and we again see that the trends are relatively consistent across the boundary. Overall, these figures support our assumption that this boundary is exogenous and can be used to evaluate the effect of the policy on new business activity.

IV.   Data

To estimate the effectiveness of the NMTC and CDFI programs, we obtained data from two primary sources. First, we use data on every establishment in California from the National Establishment Time-Series (NETS) Database, which is based on the Dun and Bradstreet (D&B) MarketPlace Files. Using the geographic coordinates in the data, we map each establishment to its corresponding census tract, using 2000 census tract boundaries. We then create a measure of the total number of new businesses in each census tract. New businesses are those that are in their first year of operation in a given tract, which includes both brand new businesses and those that moved from another location. We also group businesses by employment size into six categories – those firms with less than 5 employees, those with 5-9 employees, those with 10-19 employees, firms with 20-49 employees, firms with 50-99 employees, and those with more than 100 employees. Additionally, we create 15 industry groups using the two-digit North American

Industry Classification System (NAICS) code, providing more information about the industrial composition of those businesses that open in the tract.

We also obtained confidential information from the CDFI Fund on the specific location of each project that received funding through both the NMTC and CDFI programs. This dataset also provides details on how much money was allocated to each project – either through a subsidy or tax credit. We aggregate the data to the census tract level to examine whether it is the number of projects funded or the amount of funding per project allocated to a tract through these programs that influences the location decisions of new businesses.[13]

In order to control for eligibility and to restrict our sample to similar tracts – those near the income eligibility cutoff – we use data from the U.S. census to calculate the income eligibility ratio in each census tract. As described above, the income eligibility ratio is the ratio of the median income of the census tract relative to the state median income or the MSA median income, whichever is higher. Since other factors that are specific to a tract may be important for location decisions of businesses, we use census tract fixed effects to control for local unobservable attributes, such as socioeconomic effects and agglomeration economics, that do not change substantially during our sample period.[14] Combining all three data sets, we have a final data set of all business activity and tax credit allocations made through the NMTC and CDFI programs for all 7,039 census tracts in California from 2003 to 2009.

Table 1a presents summary statistics of NMTC and CDFI allocations for our sample. Panel A includes the overall summary statistics for all census tracts. Panel B summarizes allocations for only those tracts that are eligible to receive funding through the NMTC program

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[13] Note that for the CDFI program, we only use those funds that were allocated for business purposes, as was discussed earlier in the paper.

[14] This assumption is plausible, as it takes people time to move. Given that our sample period is less than a decade, it is unlikely that there are substantial changes in other local attributes that would not be captured by our fixed effects. Furthermore, given the nature of the census data it would not be possible for us to obtain these measures on an annual basis at the necessary level of geography for our analysis.

and panel C summarize allocations for only those tracts that are eligible for the CDFI program.

As expected, due to the eligibility criteria for the programs, NMTC and CDFI eligible tracts

receive more program allocations and higher allocation amounts than the entire sample of tracts.

Furthermore, we can see that, on average, the amount of funding received through the NMTC

tends to be higher than the CDFI program. However, the average number of funded projects per

census tract is higher for the CDFI program than the NMTC. These summary statistics highlight

the important distinction between the funding approaches used by these two programs.

Table 1b includes descriptive statistics of the business variables for all census tracts,

separated by whether a tract is eligible for the NMTC program. Table 1c again separates census

tracts by eligibility, but only includes tracts with eligibility ratios between 0.75 and 0.85. As

shown in Table 1b, eligible low-income communities have fewer new and existing businesses on

average. However, when moving closer to the eligibility cutoff as shown in Table 1c, just

eligible and just ineligible census tracts have similar numbers of new and existing businesses;

thus supporting our argument that just eligible and just ineligible census tracts are comparable.

V.   Results

Effect of the NMTC and CDFI Programs on New Business Locations

We begin by examining the effect of the NMTC and CDFI programs on the number of new

establishments in California. Table 2a presents our results estimating the effect of the NMTC

and CDFI programs on the number of new businesses in a census tract. All models include

census tract and year fixed effects and standard errors are reported in parenthesis below each

coefficient. The first column presents the results of the impact of the number of NMTC and

CDFI allocations to a given census tract for the entire sample of California. In the second

column, we restrict the sample to only those tracts with an income eligibility ratio between 0.70 and 0.90. In column (3), we further restrict the sample to only those tracts with an income eligibility ratio between 0.75 and 0.85. In all models, we do not find a statically significant effect on the number of projects funded through either program on the number of new businesses. This finding suggests that the number of projects funded does not significantly impact the number of new businesses that open in a census tract.

Columns (4) to (6) of Table 2a follow the same structure as the first three columns but now focus on the impact of the amount of funding per project (per $100,000) under each program. When we consider the entire state of California in column (4), we do not find a statistically significant effect of funding per project from either the NMTC program or the CDFI program on the number of new establishments in a census tract. This result is not surprising when looking at the entire sample, as it is possible that the areas that are eligible for the program are so different from those that are not eligible that there are other factors driving business location decisions.

In columns (5) and (6), we restrict the sample to include only those tracts close to the 0.80 income eligibility cutoff. This allows us to control for concerns that there is something inherently different across tracts that could be driving our results. By comparing just eligible tracts to just ineligible tracts close to the boundary, the samples of eligible versus ineligible tracts will have more similar attributes than all tracts in the entire state of California. When we look at only those tracts within 0.70 and 0.90 of the income eligibility ratio, we find a positive and statistically significant effect of the NMTC program on the number of new businesses, but we find a negative effect of the CDFI program. When we restrict the sample even closer to the 0.80 cutoff by looking at tracts with an income eligibility ratio between 0.75 and 0.85 in column (6),

we continue to find a positive effect of the amount of funding per project for the NMTC program, but we do not find a statistically significant effect of the CDFI program.

Overall, we find very different results regarding the overall impact of the NMTC program and the CDFI program. First, we do not find any evidence that the number of projects funded through either program affects the number of new businesses in a census tract. However, we do find a positive effect of the amount of funding per project for the NMTC program, but a negative or not statistically significant effect for the CDFI program. As mentioned earlier, the NMTC program allocated a larger amount of funding per project than the CDFI program. Therefore, our findings suggest that the amount of funding allocated through projects is what affects new businesses, not the number of projects funded. Furthermore, our differing results across the two programs suggests that there may be something about the nature in how these programs were administered that created differential effects. For instance, the fact that the NMTC was a tax credit, versus the CDFI program which was a subsidy, may provide some insight into what types of programs are more effective at generating new business activity.

One concern that policymakers might have is whether the new firms are crowding out existing businesses, thus leading to no net benefit of the program. To test this, we considered the impact of the amount of funding per project from each program on the number of deaths in a tract. Deaths are defined as businesses that stopped operations in that tract in the last year. Table 2b follows the same structure as Table 2a, but uses firm deaths as the dependent variable. In all cases, we find that neither program has a statistically significant impact on the number of deaths, suggesting that new firms are not simply crowding out existing businesses.

Effect of the NMTC and CDFI Programs on New Business Locations by Establishment Size

Next, we consider the effect of the NMTC and CDFI programs on the relative size of the new businesses that open in a given census tract. These programs were aimed at attracting new investment into these struggling communities and we would expect small businesses to be most responsive to these types of programs, as they are likely to benefit the most from government assistance. In Tables 3a and 3b, we break up the sample into the size of the establishments. Table 3a shows results for the 0.70 to 0.90 eligibility ratio range and Table 3b shows the 0.75 to 0.85 range. We separate firms into size categories of firms with fewer than 5 employees, 5-9 employees, 10-19 employees, 20-49 employees, 50-99 employees, and 100 or more employees.

In Table 3a, we find a positive and statistically significant effect of the amount of funding per project through the NMTC program on the number of new firms with fewer than five employees, but a negative and statistically significant effect of the amount of funding per project through the CDFI program on firms of the same size. However, the effects are different when we look at larger firms. For example, more funding per project from the NMTC program appears to have a negative, but small impact on the number of new firms with 50-99 employees, while CDFI program is more effective in increasing the number of firms with 20-49 employees. This suggests that the NMTC may be more effective in attracting the businesses who are mostly likely to respond to these types of incentives. There may also be offsetting effects of the policies, causing a sorting of business activity across firms of different sizes across census tracts.

In Table 3b, we consider the effects of these programs using the more restricted eligibility ratio band, comparing those tracts with an income eligibility ratio between 0.75 and 0.85. While the coefficients in this table show a similar pattern to those in Table 3a, we have lost statistical significance in almost every case, likely due to reduced sample sizes. However, in the

case of firms with less than five employees, we still find that the amount of funding per project from the NMTC program has a positive impact on attracting new firms in this size category.

Effect of the NMTC and CDFI Programs on New Business Locations across Industries

A growing literature has shown that the effect of policy may vary across sectors based on the type of policy implemented and the possibly of unintended targeting of this policy for specific industries (Hanson and Rohlin, 2011; Harger and Ross, 2015; Patrick 2015). Therefore, we consider how the effect of the amount of funding per project for the NMTC and CDFI programs varies across different industries in Tables 4a and 4b. In Table 4a, we only consider those census tracts with an income eligibility ratio between 0.70 and 0.90 and in Table 4b we further restrict the sample to those tracts with an eligibility ratio between 0.75 and 0.85. Since our results generally follow a similar pattern, we will focus our discussion on Table 4b, since by restricting the sample to those tracts closest to the income eligibility cutoff we minimize confounding factors which may be driving our results.

In Table 4b, we find a negative effect of the amount of funding per project through the NMTC on the number of new firms in the wholesale industry. However, we find positive effects of the program on the number of new firms in retail, information services, financial insurance and real estate (FIRE), professional services, and arts and food services. This is not surprising given the nature of the allocation of the NMTC program. According to Abravanel et al. (2013), 46% of the projects funded by the NMTC were used for office, retail, mixed use, or hotel development, 22% to social services, educational, or cultural/arts use, 18% to manufacturing, industrial, or agricultural uses, 9% to health facilities, and 5% to housing.[15] Our results suggest

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[15] Harger and Ross (2015) found evidence of this type of sorting across industries as well, with patterns that are generally similar, specifically with regards to retail. In that paper, the authors broke up industries by the SIC code,

that the allocation of this tax credit attracts firms in industries most likely to receive NMTC

funding, but at the cost of other types of firms, such as those in wholesale trade. This finding is

consistent with previous literature that has found sorting of industries across space in response to

different types of policy initiatives.

Overall, we do not find strong evidence of an effect of the amount of funding per project

through the CDFI program on new businesses across industries. The only evidence of a

statistically significant effect is a negative impact on the number of new information services

firms in the 0.70 to 0.90 eligibility ratio range. Therefore, we conclude that there is little

evidence of differential effects across industries of the CDFI program on new business activity.

Finally, in Tables 5a and 5b we examine at the effects of the NMTC and CDFI programs

on the number of new firms in each industry by the size of the firm. Panel A looks at the

industry-specific results for those firms with fewer than five employees, Panel B for 5-9

employees, Panel C for 10-19 employees, Panel D for 20-49 employees, and Panel E for 50-99

employees.[16]   Again, to streamline the discussion we focus first on the results in Table 5b to

discuss the impact of the NMTC, as the patterns are generally similar and focusing on those

tracts closest to the 0.80 cutoff provides more precise estimates.

The results for the NMTC for industries by firm size show evidence of sorting

mechanisms along both size and industry. For example, looking at the smallest firms, those with

fewer than five employees, we find a similar pattern as we did for the overall sample.

Specifically, we find a negative effect of the amount of funding per project on the number of new

small businesses in wholesale, but that the NMTC results in more small new businesses in retail,

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versus our use of NAICS codes, making the direct comparison of some of the results difficult due to the nature of
the classification of industries.

[16] We have also run all regressions by industry for those firms with 100 or more employees. We find no statistical
significance for this size category, and in the interest of space do not present these results. They are available from
the authors upon request.

information services, FIRE, professional services and arts and food services. However, for those firms that are slightly larger with five to nine employees, an increase in the amount of funding per project from the NMTC results in fewer new firms in manufacturing, retail, and arts and food services; but an increase in professional services firms.

Our results suggest the NMTC may be causing sorting across firm size within an industry. For example, the NMTC appears to be effective in increasing retail firms and firms in the arts and food services industries with fewer than five employees, but leads to fewer new firms in those same industries with five to nine employees.   We see an opposite effect in wholesale, where there are fewer small new firms and those with 50 to 99 employees, but an increase in new firms with 20-49 employees. As expected from our previous results, increasing the amount of per project funding through the NMTC results in increases in professional services firms with fewer than five employees and those with five to nine employees. However, while manufacturing overall was not impacted by the NMTC, it results in fewer new manufacturing firms with five to nine employees and with 50 to 99 employees.

When looking at the effect of the amount of funding per project through the CDFI program on the by size and industry results, we only obtain statistical significance in the larger income eligibility band. In Table 5a, we see that the negative effect found earlier on new firms with fewer than five employees seems to be concentrated in the construction, information services, and professional services industries. Similar to the NMTC program, we see some evidence of sorting across industry and firm size. Specifically, in the construction industry CDFI funding is associated with fewer new firms with less than five employees and between 50 and 99 employees, but an increase in the number of new firms with 10 to 19 employees. Additionally, there is some weak evidence that CDFI funding is leading to fewer new firms in information

services and professional services with fewer than five employees but an increase in new firms in these industries with 20 to 49 workers.

Our results suggest that the larger amounts of funding per project from the NMTC program can be effective in attracting certain types and sizes of businesses to a tract, especially small businesses. Given that most new businesses are small, this suggests that the NMTC may be helping to grow new businesses rather than relocate them from one region to another. At the same time, the CDFI program appears to have little impact on increasing the number of new businesses. However, there is some evidence that it may be effective in attracting medium-sized businesses in some industries.[17]

VI.   Conclusions and Policy Implications

Previous research has found strong evidence that new businesses and entrepreneurial activity can positively impact U.S. regional job growth. This suggests that policies that attract new businesses can lead to economic growth in otherwise disadvantaged areas. Understanding the effectiveness of various policies is important in order to best target scarce resources to these efforts, especially given the lingering economic recession and ongoing economic restructuring of the U.S. economy.

In the past, a substantial amount of government funds have been targeted to low-income areas with the goal of promoting economic growth and development in lagging regions. The success of these different programs has varied depending on various factors. Based on the

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[17] We also considered the impacts of the programs on firm deaths by industry, firm size, and industries broken out by firm size. In general, neither program was associated with changes in the number of firm deaths in a tract. However, in a few cases, there was evidence of an impact by the NMTC program, mostly resulting in fewer deaths. For example, additional funding per project in the NMTC program appear to have resulted in fewer firm deaths in manufacturing and fewer deaths of the largest firms. There is also some weak evidence that it may have led to small increases in deaths in firms with 50-99 employees, however, except for the overall firm death results, most models had very low statistical power. In the interest of space, the full results are not reported here but are available from the authors upon request.

previous research, it appears that one way to help economically distressed communities is to provide incentives through subsidies and tax credits to entrepreneurs to locate their new establishment in struggling areas. The NMTC and CDFI programs were created with the goal of increasing the amount of investments in targeted communities, particularly low income and high poverty areas.

Our results suggest that larger investments in a region through the NMTC program have been effective in attracting new businesses to lower income communities, especially small businesses and those that operate in the retail, FIRE, information services, professional services, and arts and food services industries. However, there is some evidence that this increase in business activity may have been at the expense of slightly larger firms and those in the wholesale industry. Furthermore, we find that there is sorting across firms of different sizes in the same industries. For example, we find that there is an increase in the number of firms in the smallest size category in the retail and arts and services industries, but this effect is offset by fewer new larger firms that are in larger size categories. Overall, our findings suggest that there is a sorting taking place as a result of the NMTC program, which is consistent with a standard urban model where the firm which values locating in an area the most will outbid others to locate in that jurisdiction. In addition, we find no evidence that the new firms attracted by the NMTC program are simply crowding out existing firms. Finally, we find little evidence that the CDFI program by itself has had an impact on new business activity.

In addition, while we do find that higher levels of funding per project through the NMTC program increases new business activity, this amount is economically small. Specifically, we find that an increase in the funding per project of $100,000 is associated with a 0.1172 increase in new business activity in the 0.75 to 0.85 eligibility ratio range. In this range, the average

amount of amount of funding received for a project was $3.2 million. Given our coefficient estimates, this implies that an area near the eligibility cutoff that receives the average project gets 3.8 additional new businesses, an increase of about 11% from the average number of new businesses in this eligibility ratio range. Therefore, while we do find statistically significant effects, there are likely to be concerns as to whether these programs are generating enough new businesses to justify the costs of the program.

For policymakers who are interested in stimulating economic growth in disadvantaged regions, our results suggest that it is the amount of funding per project provided that attracts new establishments. It also may be the type of funding that matters, as the NMTC program provides a tax credit, compared to the subsidy offered through the CDFI program. Thus, to support economic growth through new business development, our results indicate that it may be more important to direct larger amount of funding per project to key areas rather than to sprinkle small amounts of funding over more areas. However, it should be noted that this study is only based on data from two programs in California, with particular focus on census tracts that are near an income eligibility ratio. Future researchers should expand upon our analysis and consider other parts of the U.S., as well as to look for alternative identification strategies that would allow us to study the impact of the program on all census tracts and not just those near the income eligibility threshold.

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Figure 1a: Average Percent White in Census Tract in 2000 over the Eligibility Ratio
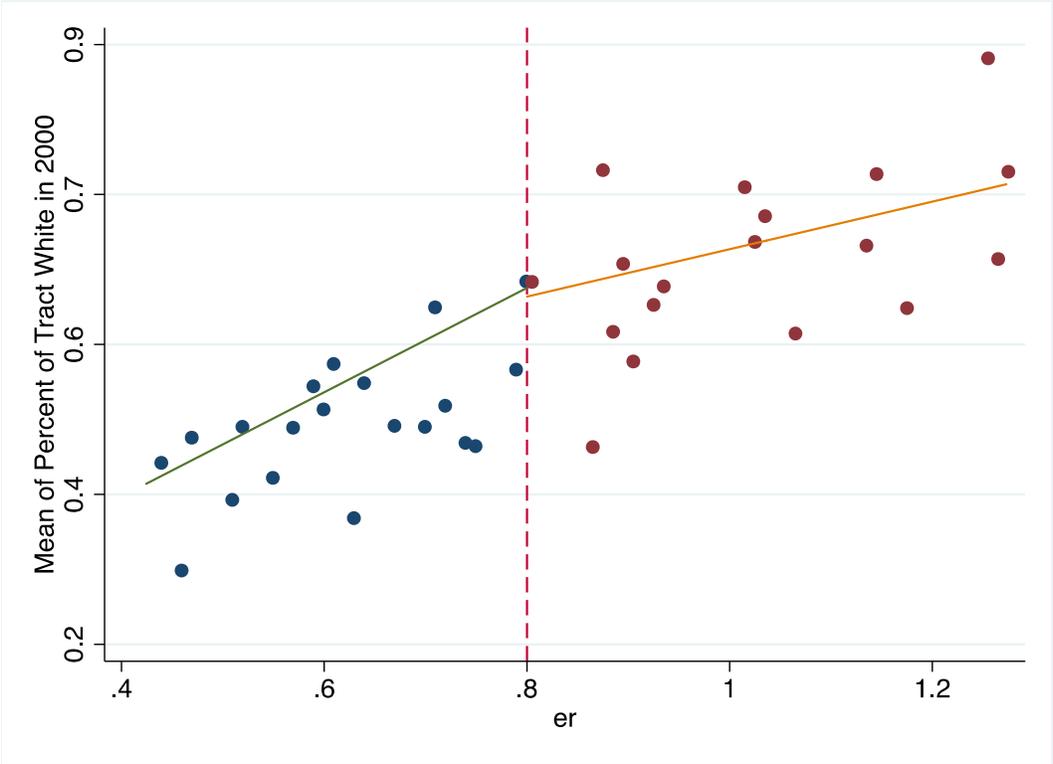
Figure 1b: Average Percent Black in Census Tract in 2000 over the Eligibility Ratio
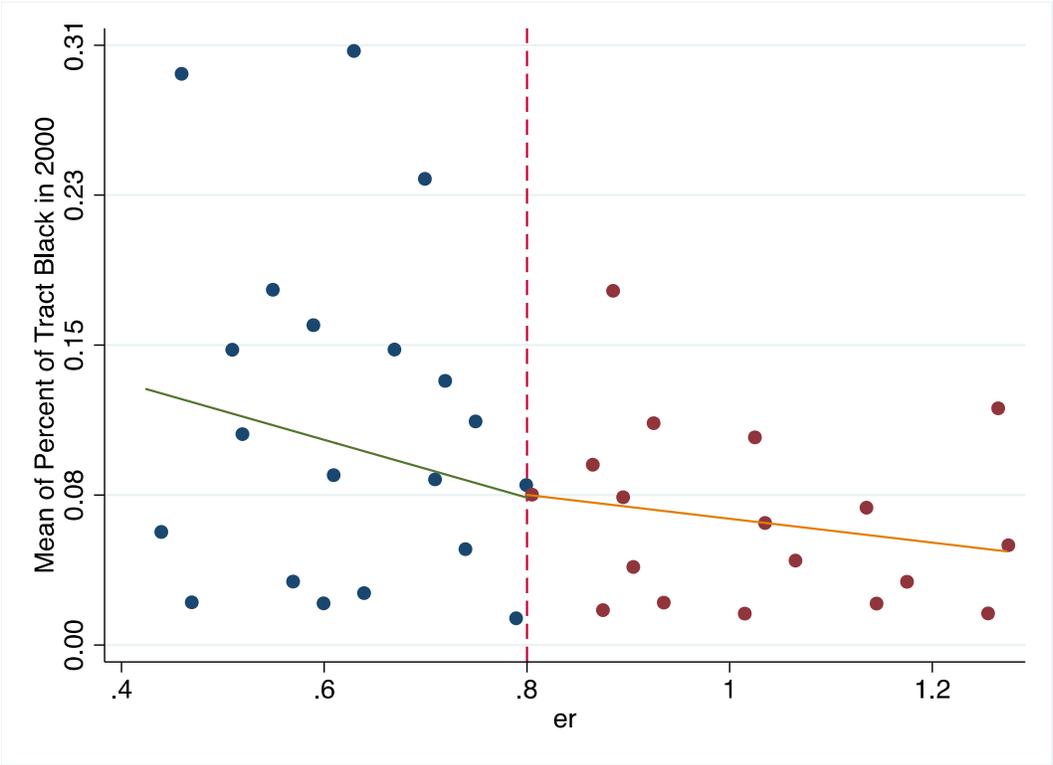
Figure 1c: Average Percent Hispanic in Census Tract in 2000 over the Eligibility Ratio
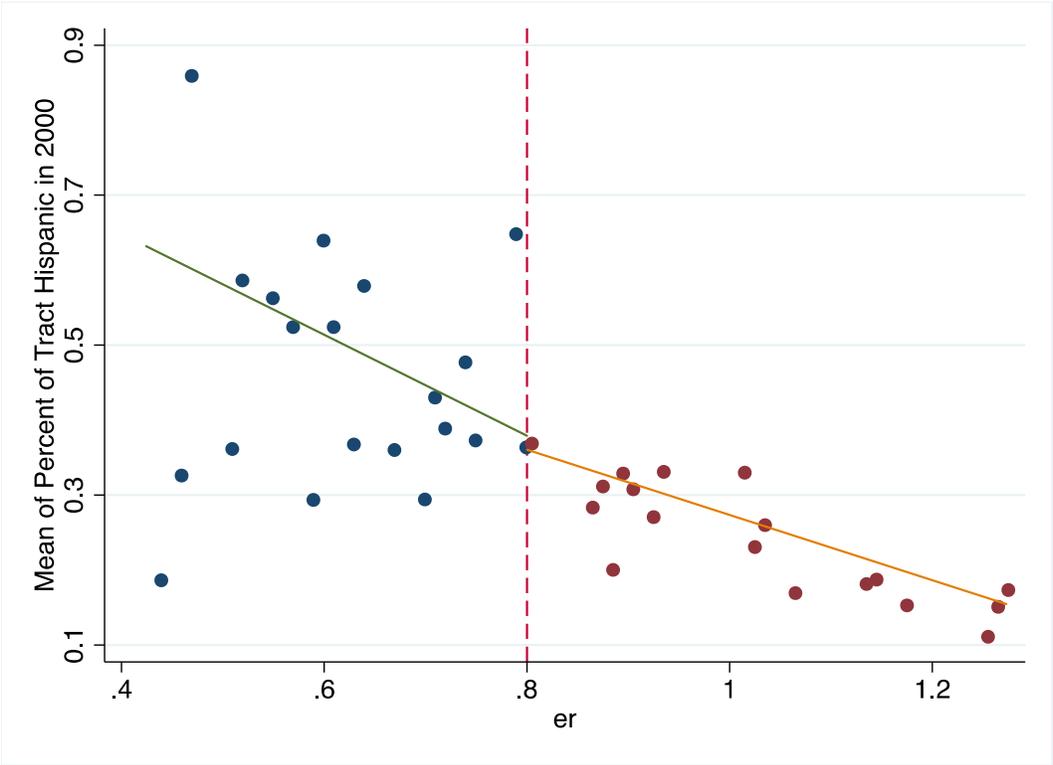
Figure 1d: Average Percent No High School Education in Census Tract in 2000 over the Eligibility Ratio
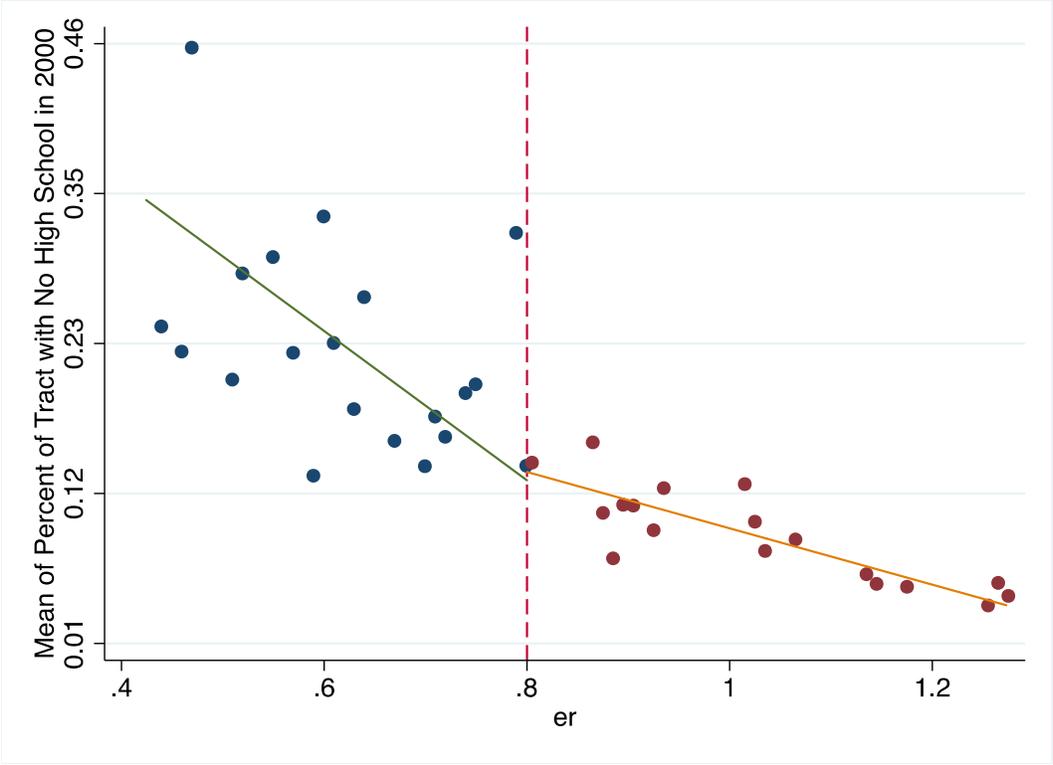
Figure 1e: Average Percent Some College Education in Census Tract in 2000 over the Eligibility Ratio
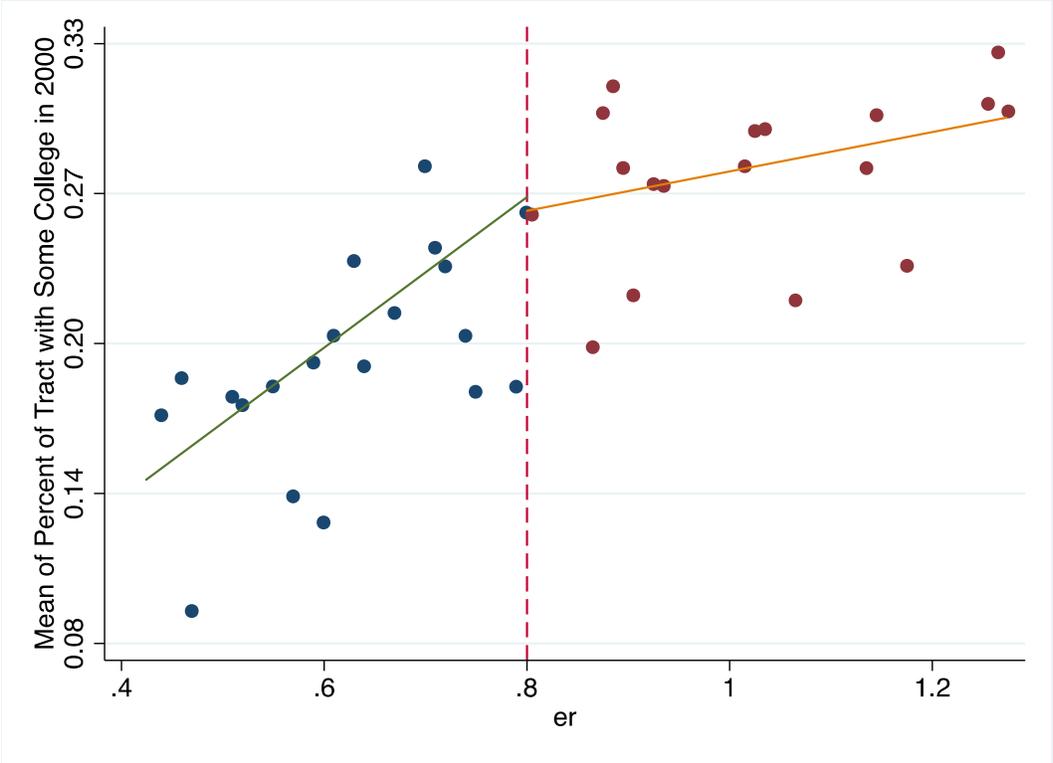
Figure 1f: Average Number of Existing Businesses in Census Tract in 2003 over the Eligibility Ratio
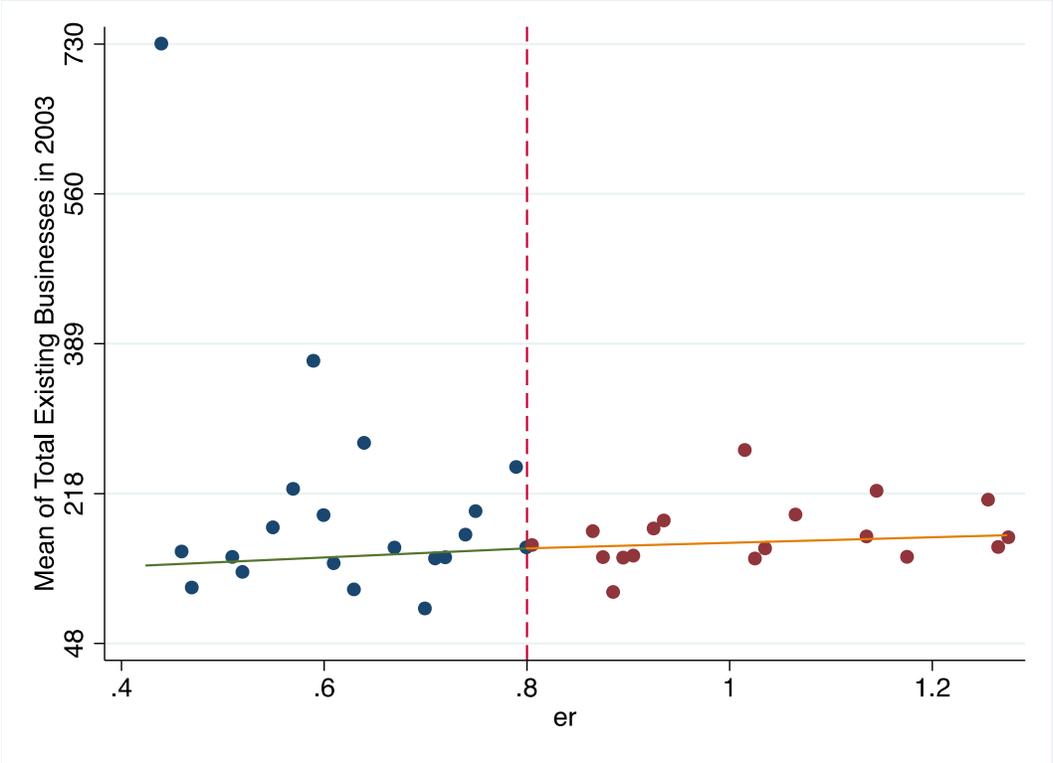
Table 1a: Summary Statistics of Allocation Amounts

	Obs.	Mean	St. Dev.	Min.	Max.
Panel A: Overall					
Number of NMTC Allocations	49,273	0.010	0.181	0	22
NMTC Allocation Amounts	49,273	32,714	852,689	0	96,329,674
Number of CDFI Allocations	49,273	0.258	5.322	0	593
CDFI Allocation Amounts	49,273	18,035	237,688	0	15,600,000
Panel B: NMTC Eligible Tracts					
Number of NMTC Allocations	20,152	0.023	0.280	0	22
NMTC Allocation Amounts	20,152	78,236	1,328,617	0	96,329,674
Number of CDFI Allocations	20,152	0.368	6.967	0	593
CDFI Allocation Amounts	20,152	29,748	315,090	0	15,600,000
Panel C: CDFI Eligible Tracts					
Number of NMTC Allocations	22,630	0.021	0.264	0	22
NMTC Allocation Amounts	22,630	69,760	1,254,132	0	96,329,674
Number of CDFI Allocations	22,630	0.378	6.951	0	593
CDFI Allocation Amounts	22,630	27,779	302,154	0	15,600,000

Table 1b: Summary Statistics for Eligible and Ineligible Census Tracts

	Eligible Tracts		Ineligible Tracts	
	Mean	St. Dev	Mean	St. Dev
Existing Businesses	175.067	239.075	206.599	230.359
New Businesses	33.368	47.350	42.799	50.786
Business Deaths	17.849	29.162	20.420	29.200
New Businesses – less than 5 employees	31.610	43.999	41.601	48.121
New Businesses – 5-9 employees	1.870	4.013	2.186	3.774
New Businesses – 10-19 employees	1.006	2.641	1.090	2.379
New Businesses – 20-49 employees	0.627	1.963	0.643	1.739
New Businesses – 50-99 employees	0.216	0.822	0.207	0.712
New Businesses – over 100 employees	0.134	0.573	0.127	0.546
New Construction	2.187	3.211	3.161	3.696
New Manufacturing	1.236	2.893	1.315	2.304
New Wholesale	1.832	4.436	1.794	3.161
New Retail	4.282	7.059	3.916	5.169
New Information	0.923	2.554	1.426	3.777
New FIRE	3.055	7.073	4.692	8.993
New Professional Services	9.905	17.636	16.851	22.022
New Arts/ Food Services	1.519	2.625	1.823	2.845

Table 1c: Summary Statistics for Census Tracts with Eligibility Ratio between 0.75 and 0.85

	Eligible Tracts $0.75 \leq ER \leq 0.80$		Ineligible Tracts $ER > 0.80$ & $ER \leq 0.85$	
	Mean	St. Dev	Mean	St. Dev
Existing Businesses	198.104	123.536	183.876	201.131
New Businesses	33.286	22.148	36.998	45.598
Business Deaths	19.721	18.129	19.755	29.270
New Businesses – less than 5 employees	31.412	20.858	35.396	42.250
New Businesses – 5-9 employees	2.039	2.412	1.991	3.878
New Businesses – 10-19 employees	1.091	1.614	1.014	2.465
New Businesses – 20-49 employees	0.688	1.480	0.590	1.705
New Businesses – 50-99 employees	0.273	0.711	0.201	0.685
New Businesses – over 100 employees	0.133	0.433	0.112	0.459
New Construction	2.321	2.170	2.969	3.648
New Manufacturing	1.250	1.836	1.319	2.583
New Wholesale	1.633	2.717	1.884	4.137
New Retail	3.961	3.569	4.348	7.033
New Information	0.867	1.231	1.061	2.131
New FIRE	2.763	2.616	3.732	7.395
New Professional Services	11.468	9.497	12.350	16.335
New Arts/ Food Services	1.926	1.974	1.614	2.420

Table 2a: The Effect of NMTC and CDFI Programs on the Number of New Businesses

Cutoff Range	(1) Entire ER Range	(2) 0.70 ≤ ER ≤ 0.90	(3) 0.75 ≤ ER ≤ 0.85	(4) Entire ER Range	(5) 0.70 ≤ ER ≤ 0.90	(6) 0.75 ≤ ER ≤ 0.85
Number of NMTC Projects	-0.487	0.353	2.100	-	-	-
	(0.547)	(1.225)	(1.963)	-	-	-
Number of CDFI Projects	0.162	0.491	-0.812	-	-	-
	(0.315)	(0.610)	(1.256)	-	-	-
NMTC Amount per Project	-	-	-	0.0305	0.0711*	0.1172**
	-	-	-	(0.0259)	(0.0406)	(0.0593)
CDFI Amount per Project	-	-	-	-0.1311	-0.3502**	-0.1015
	-	-	-	(0.1046)	(0.1550)	(0.3650)
Observations	49,273	12,082	4,389	49,273	12,082	4,389
R-squared	0.228	0.227	0.236	0.228	0.228	0.236

Standard errors are reported in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Census tract and year fixed effects are included in all regressions.

Table 2b: The Effect of NMTC and CDFI Programs on the Number of Businesses Deaths

	(1)	(2)	(3)	(4)	(5)	(6)
	Entire ER	0.70 ≤ ER ≤	0.75 ≤ ER ≤	Entire ER	0.70 ≤ ER ≤	0.75 ≤ ER ≤
Cutoff Range	Range	0.90	0.85	Range	0.90	0.85
Number of NMTC Projects	-0.299	-0.183	-0.0942	-	-	-
	(0.375)	(0.903)	(1.563)	-	-	-
Number of CDFI Projects	-0.525**	-0.598	-0.162	-	-	-
	(0.215)	(0.450)	(1.000)	-	-	-
NMTC Amount per Project	-	-	-	0.0117	0.00448	-0.0126
	-	-	-	(0.0177)	(0.0300)	(0.0472)
CDFI Amount per Project	-	-	-	-0.0707	0.0151	0.0486
	-	-	-	(0.0716)	(0.114)	(0.290)
Observations	49,273	12,082	4,389	49,273	12,082	4,389
R-squared	0.095	0.086	0.078	0.095	0.086	0.078

Standard errors are reported in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Census tract and year fixed effects are included in all regressions.

Table 3a: The Effect of NMTC and CDFI Amount of Funding per Project within a Census Tract on New Business Location, by firm size, $0.70 \leq ER \leq 0.90$

	(1)	(2)	(3)	(4)	(5)	(6)
Number of Employees	Less than 5	5-9	10-19	20-49	50-99	100 or More
NMTC Amount per Project	0.0683*	-0.0052	-0.000832	0.00183	-0.00227*	-8.64E-05
	(0.0402)	(0.0047)	(0.0034)	(0.0027)	(0.0013)	(9.93E-04)
CDFI Amount per Project	-0.382**	0.0125	0.00436	0.0365***	-0.003	-0.00033
	(0.153)	(0.0179)	(0.0131)	(0.0102)	(0.0049)	(0.00038)
Observations	12,082	12,082	12,082	12,082	12,082	12,082
R-squared	0.229	0.102	0.076	0.061	0.025	0.012

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Census tract and year fixed effects included in all regressions. Firm size of small indicates a firm with less than 10 employees. Medium firms have between 10 and 100 employees and large firms have over 100 employees.

Table 3b: The Effect of NMTC and CDFI Amount of Funding per Project within a Census Tract on New Business Location, by firm size, $0.75 \leq ER \leq 0.85$

	(1)	(2)	(3)	(4)	(5)	(6)
Number of Employees	Less than 5	5-9	10-19	20-49	50-99	100 or More
NMTC Amount per Project	0.114*	-0.008	-0.0018	0.00194	-0.0026	-0.000370
	(0.059)	(0.0065)	(0.0048)	(0.0036)	(0.0017)	(0.0013)
CDFI Amount per Project	-0.126	-0.0355	-0.0071	0.00357	-0.0025	-0.000439
	(0.363)	(0.0402)	(0.0296)	(0.0223)	(0.0107)	(0.0078)
Observations	4,389	4,389	4,389	4,389	4,389	4,389
R-squared	0.236	0.1	0.078	0.059	0.03	0.019

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Census tract and year fixed effects included in all regressions. Firm size of small indicates a firm with less than 10 employees. Medium firms have between 10 and 100 employees and large firms have over 100 employees.

Table 4a: The Effect of NMTC and CDFI Funding Per Project on the Number of New Businesses by Industry, $0.70 \leq ER \leq 0.90$

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
							Prof.	Arts, Food
Industry	Constr.	Manu.	Wholesale	Retail	Infor.	FIRE	Services	Services
NMTC Amount per Project	0.00213	-0.000610	-0.0295***	0.0265***	0.00339	0.0127*	0.0427**	0.00824**
	(0.0052)	(0.0031)	(0.0044)	(0.0067)	(0.0038)	(0.0075)	(0.0214)	(0.0038)
CDFI Amount per Project	-0.0335*	-0.0121	-0.0147	-0.0284	-0.0429***	-0.0283	-0.153*	-0.0033
	(0.0199)	(0.012)	(0.0168)	(0.0255)	(0.0144)	(0.0287)	(0.0817)	(0.0143)
Observations	12,082	12,082	12,082	12,082	12,082	12,082	12,082	12,082
R-squared	0.078	0.028	0.062	0.072	0.02	0.07	0.277	0.085

Standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Census tract and year fixed effects included in all regressions. Prof. services includes professional and business services, and arts, food services includes art, entertainment, recreation, accommodation, and food services.

Table 4b: The Effect of NMTC and CDFI Funding Per Project on the Number of New Businesses by Industry, $0.75 \leq ER \leq 0.85$

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
							Prof.	Arts, Food
Industry	Constr.	Manu.	Wholesale	Retail	Infor.	FIRE	Services	Services
NMTC Amount per Project	-0.0028	-0.0051	-0.0563***	0.0530***	0.00798*	0.0253**	0.0675**	0.00984*
	(0.0075)	(0.0044)	(0.0066)	(0.0102)	(0.0042)	(0.0113)	(0.031)	(0.0052)
CDFI Amount per Project	-0.0021	-0.0271	0.017	-0.0034	-0.0041	-0.0082	-0.0704	0.00932
	(0.0461)	(0.0273)	(0.0407)	(0.0624)	(0.026)	(0.0697)	(0.19)	(0.0317)
Observations	4,389	4,389	4,389	4,389	4,389	4,389	4,389	4,389
R-squared	0.078	0.032	0.073	0.071	0.03	0.066	0.293	0.088

Standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Census tract and year fixed effects included in all regressions. Prof. services includes professional and business services, and arts, food services includes art, entertainment, recreation, accommodation, and food services.

Table 5a: The Effect of NMTC and CDFI Funding Per Project on the Number of New Businesses in each Industry, $0.70 \leq ER \leq 0.90$

Industry	Constr.	Manu.	Wholesale	Retail	Infor.	FIRE	Prof. Services	Arts, Food Services
Panel A: Less Than 5 Employees								
NMTC Amount per Project	0.00297	-0.0012	-0.0333***	0.0302***	0.00316	0.0146**	0.0394*	0.00929***
	(0.0051)	(0.0029)	(0.0043)	(0.0066)	(0.0036)	(0.0074)	(0.0212)	(0.0034)
CDFI Amount per Project	-0.0361*	-0.0139	-0.0221	-0.0238	-0.0361***	-0.0435	-0.141*	-0.0081
	(0.0196)	(0.0112)	(0.0166)	(0.0252)	(0.0137)	(0.0281)	(0.081)	(0.0129)
Panel B: 5 to 9 Employees								
NMTC Amount per Project	0.000658	-0.00295***	-0.000521	-0.00257**	-0.000293	-0.00253**	0.00363**	1.33E-05
	(0.001)	(0.001)	(0.0011)	(0.0013)	(0.000654)	(0.0013)	(0.0017)	(0.001)
CDFI Amount per Project	0.000834	-0.0014	0.000726	0.00333	0.000881	0.00536	-0.0026	0.00122
	(0.0039)	(0.0038)	(0.0042)	(0.0049)	(0.0025)	(0.00048)	(0.0063)	(0.0039)
Panel C: 10 to 19 Employees								
NMTC Amount per Project	-0.000857	0.000146	0.000141	-0.000994	5.19E-05	0.000393	-0.000422	0.000507
	(0.000805)	(0.000796)	(0.000829)	(0.000846)	(0.000440)	(0.000858)	(0.0013)	(0.001)
CDFI Amount per Project	0.00527*	0.00219	-0.0029	0.000745	0.00107	0.00727**	-0.00883*	-0.000931
	(0.0031)	(0.003)	(0.0032)	(0.0032)	(0.0017)	(0.0033)	(0.0048)	(0.0039)
Panel D: 20 to 49 Employees								
NMTC Amount per Project	-0.000341	0.000171	0.00139**	-0.00144**	0.000169	0.000492	0.000769	9.83E-05
	(0.000620)	(0.000703)	(0.000601)	(0.000659)	(0.000387)	(0.000557)	(0.000922)	(0.000698)
CDFI Amount per Project	0.000794	0.00265	-0.000453	0.000207	0.00593***	-0.000335	0.00934***	0.00297
	(0.0024)	(0.0027)	(0.0023)	(0.0025)	(0.0015)	(0.0021)	(0.0035)	(0.0027)
Panel E: 50 to 99 Employees								
NMTC Amount per Project	0.000379	-0.00114***	-0.000605**	-3.22E-05	-2.96E-05	2.82E-05	-0.000239	-0.000113
	(0.000315)	(0.000415)	(0.000291)	(0.000306)	(0.000227)	(0.000317)	(0.000532)	(0.000413)
CDFI Amount per Project	-0.00214*	-0.000559	-0.000815	-0.00209*	0.00190**	-0.000599	-0.0028	0.00453***
	(0.0012)	(0.0016)	(0.0011)	(0.0012)	(0.000868)	(0.0012)	(0.002)	(0.0016)

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Census tract and year fixed effects included in all regressions. Prof. services includes professional and business services, and arts, food services includes art, entertainment, recreation, accommodation, and food services.

Table 5b: The Effect of NMTC and CDFI Funding Per Project on the Number of New Businesses in each Industry, $0.75 \leq ER \leq 0.85$

Industry	Constr.	Manu.	Wholesale	Retail	Infor.	FIRE	Prof. Services	Arts, Food Services
				Panel A: Less Than 5 Employees				
NMTC Amount per Project	-0.0027	-0.006	-0.0620***	0.0587***	0.00578	0.0254**	0.0668**	0.0145***
	(0.0073)	(0.0042)	(0.0066)	(0.0102)	(0.0041)	(0.011)	(0.0307)	(0.0047)
CDFI Amount per Project	0.0213	-0.0172	0.00687	-0.0201	-0.0061	-0.0135	-0.0708	-0.0062
	(0.0451)	(0.0259)	(0.0403)	(0.0629)	(0.0254)	(0.0677)	(0.189)	(0.0288)
				Panel B: 5 to 9 Employees				
NMTC Amount per Project	0.000112	-0.00467***	-0.001	-0.00547***	0.000264	-0.0024	0.00783***	-0.00260*
	(0.0015)	(0.0014)	(0.0014)	(0.0018)	(0.000846)	(0.002)	(0.0024)	(0.0014)
CDFI Amount per Project	-0.0039	-0.0103	0.00165	0.00686	-0.0028	-8.87E-05	-0.0011	-0.000234
	(0.009)	(0.0087)	(0.0085)	(0.011)	(0.0052)	(0.0124)	(0.0146)	(0.0086)
				Panel C: 10 to 19 Employees				
NMTC Amount per Project	-0.001	-0.0014	-0.000389	-0.000649	0.00109*	0.00169	-0.0015	-0.000935
	(0.0011)	(0.0011)	(0.0012)	(0.0012)	(0.000601)	(0.0013)	(0.0015)	(0.0015)
CDFI Amount per Project	-0.0019	-0.004	-0.0013	0.00377	0.00147	-0.000427	-0.0078	0.00346
	(0.0069)	(0.0067)	(0.0074)	(0.0072)	(0.0037)	(0.0082)	(0.009)	(0.009)
				Panel D: 20 to 49 Employees				
NMTC Amount per Project	-0.000649	0.00148	0.00311***	-0.0014	-8.38E-05	4.51E-05	-0.0017	-0.000299
	(0.00081)	(0.000998)	(0.000866)	(0.000946)	(0.000452)	(0.000762)	(0.0012)	(0.000949)
CDFI Amount per Project	-0.0014	0.000606	-0.0016	0.00154	-0.001	0.000674	0.000214	-0.000124
	(0.005)	(0.0061)	(0.0053)	(0.0058)	(0.0028)	(0.0047)	(0.0071)	(0.0058)
				Panel E: 50 to 99 Employees				
NMTC Amount per Project	0.000708*	-0.00169***	-0.000755*	0.000340	-0.000502	0.000264	-0.000841	-0.000477
	(0.000396)	(0.000600)	(0.000414)	(0.000433)	(0.000328)	(0.000504)	(0.000642)	(0.000511)
CDFI Amount per Project	-0.0017	0.000373	-0.000472	-0.0033	-0.000703	-0.000455	0.00238	0.000570
	(0.0024)	(0.0037)	(0.0025)	(0.0027)	(0.002)	(0.0031)	(0.004)	(0.0031)

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Census tract and year fixed effects included in all regressions. Prof. services includes professional and business services, and arts, food services includes art, entertainment, recreation, accommodation, and food services.