

Do Capital Tax Incentives Attract New Businesses?  
Evidence across Industries from the New Markets Tax Credit

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**Abstract**

All levels of government pursue policies to attract new businesses with the hope that these enterprises will create local economic growth. In this paper, we use the New Markets Tax Credit (NMTC) to determine the effect of a capital tax credit on where firms in different types of industries locate. When estimating the impact of the NMTC on business location, there are likely to be unobservable local characteristics that are correlated with where businesses choose to open that would cause OLS estimates to be biased. To control for the endogenous selection, we use a plausibly exogenous eligibility cutoff and compare census tracts that are just eligible for the tax credit to those that are just ineligible. Using data from the Dun and Bradstreet MarketPlace Files, we find that in Metropolitan Statistical Areas, the NMTC incentivized new businesses to locate in tracts that were eligible for the tax credit in 2002 and 2004. However, we find that in 2006 the tax credit deterred new establishments. When we stratify the 2006 sample by industry, we find that this capital tax credit attracted more capital intensive industries, such as manufacturing, while deterring more labor intensive industries, such as services. Our results are important to policy makers, as we find that the type of tax credit offered causes a sorting of different industries across locations.

## I. Introduction

New businesses are considered to be a key driver of local economic growth in the United States. Since new establishments are so important to the local economy, policy makers at all levels of government design tax policies to attract new businesses with the hope that these enterprises will drive future growth within their jurisdiction (Neumark et al., 2007). Tax credit programs are typically place-based policies, where a business is eligible to receive the credit if it locates in a specific area, typically low-income or high-poverty census tracts. In general, research that has estimated the impact of tax credits on where businesses locate has produced mixed results, with some researchers finding tax credits attract new establishments while others find the policy has no significant effect.<sup>1</sup>

One explanation for the discrepancy regarding the effect of place-based programs on business location decisions is that there are heterogenous effects of different policies across industries (Hanson & Rohlin, 2011b; Patrick, 2014). For example, the government could offer a tax credit to firms that locate in a specific area and hire workers from that jurisdiction.<sup>2</sup> A program such as this effectively creates a labor subsidy for businesses that locate in the area, so we expect industries that are more labor-intensive will outbid industries that are more capital-intensive for land in the areas that are eligible for the credit. Sorting of this type is consistent with the standard urban economics model, which predicts that the firm or household that values locating in a given area the most will outbid others for the land in that area.

In this paper, we use the New Markets Tax Credit (NMTC) to determine the effect of a capital investment tax credit on the location decisions of new businesses. We consider not only

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<sup>1</sup> For example, there is an extensive literature that has looked at the impact of the Enterprise Zone program on business location decisions (see Oakley & Tsao (2006), Hanson (2009), Krupka & Noonan (2009), Hanson & Rohlin (2011a) and (2011b), and Busso, Gregory, & Kline (2013) for more information)

<sup>2</sup> This type of program would be similar to the Enterprise Zone (EZ) program, though there are other conditions of the EZ program which we do not consider in this simple example.

at the effect of the policy on all types of establishments, but also how the effect of the policy varies across firms in different types of industries, specifically capital-intensive versus labor-intensive industries. The NMTC, which was passed in 2000, provides a tax credit to businesses to make capital investments in low-income communities.<sup>3</sup>

One of the issues when estimating the effect of a place-based tax credit on business location decisions is that there is likely to be a non-random selection of communities by both businesses and policy makers. First, businesses choose which neighborhood to locate in based on numerous local attributes, some of which are observable, such the poverty rate and the crime rate, and others that are unobservable, such as agglomeration economies. If these unobserved attributes are correlated with where the NMTC is allocated, then simple OLS estimates would produce biased results. Second, there is a selection process with regards to which businesses receive the tax credit. Not all applicants for the NMTC receive the credit. Therefore, to compare those businesses that received the tax credit to those that did not would be problematic if firms were selected based on expected growth in the area.

To control for these factors and obtain causal estimates, we draw upon a plausibly exogenous eligibility cutoff in the NMTC to determine whether or not the program attracted new establishments. Eligibility for the NMTC program is based on the ratio of the census tract median family income (MFI) to the state MFI, which we refer to as the income eligibility ratio. To be eligible to receive the NMTC, the income eligibility ratio in a given census tract must be less than 0.80.<sup>4</sup> We use whether or not a census tract falls just above or just below this cutoff as exogenous variation to estimate the effect of the NMTC on business location decisions. Note that we do not know whether or not a specific business was allocated the tax credit, only if the

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<sup>3</sup> Other papers that have looked at the economic impact of the NMTC are Gurley-Calvez et al. (2009), Freedman (2012), and Freedman (2013). We discuss each of these papers in more detail later.

<sup>4</sup> We will discuss in detail the specifics of the NMTC program and the eligibility criteria later in the paper.

business located in a tract that was eligible to receive the credit. By comparing business activity in tracts that just qualify to receive the NMTC to those that just fail to qualify, we are able to control for unobserved local attributes that could bias our results. In addition, by focusing only on eligibility, not the actual allocation of the tax credit, we are also able to remove any concerns regarding endogenous selection of which businesses receive the tax credit.

To conduct our analysis, we use data from the Dun and Bradstreet (D&B) MarketPlace files from the second quarter of 1994, 2002, 2004, and 2006. The D&B data contains a wealth of information on establishments at the ZIP code level, including the SIC code of each business. In addition, the D&B data has information on how long each business has been open. Throughout the paper, we define a new business as an establishment that has been open for less than one year and an existing business as an establishment that has been open for four or more years.

When we estimate the effect of the NMTC on businesses across all census tracts in the U.S., we find that businesses are less likely to locate in those tracts that are eligible to receive the NMTC. However, businesses are likely to prefer to locate in areas with lower poverty rates and higher incomes, and these areas are not eligible for the NMTC. These higher income tracts are likely to have unobservable attributes that are substantially different from those low-income tracts that are eligible for the tax credit. To address this issue, we restrict the sample to those census tracts that are just above and just below the 0.80 income eligibility ratio. We focus first on those tracts that have an income eligibility ratio between 0.70 and 0.90, and then further restrict the sample to those with an eligibility ratio between 0.79 and 0.81. With both of these restrictions, we estimate a positive impact of the NMTC on business location decisions, but this effect is not statistically significant.

Next, we restrict our sample to only those tracts located in metropolitan areas. Previous research has found that rural growth and development is fundamentally different from urban growth and development, suggesting that rural and urban areas should be examined separately (Stephens & Partridge, 2011; Rupasingha & Goetz, 2013; Stephens, Partridge, & Faggian, 2013).<sup>5</sup> When we focus on just those census tracts located in MSAs that are near the income eligibility ratio, we find that a new business is more likely to locate in the census tract that is eligible for the NMTC in 2002 and 2004. However, we find a negative and statistically significant effect of the tax credit in 2006.

As mentioned earlier, the NMTC is a capital subsidy, so it is possible that the credit will have a different effect on different types of industries. More specifically, we expect that firms in capital-intensive industries will value locating in the eligible tracts more than firms in labor-intensive industries. When we stratify our results by industry, we find that in 2006 the NMTC had a positive effect on manufacturing, a capital-intensive industry. We also find that in 2006 there was a negative and statistically significant effect of the NMTC on the service industry, a labor-intensive industry. This finding supports existing work that has found that the impact of government programs varies based on whether the policy favors investment in capital or labor (Hanson & Rohlin, 2011b; Patrick, 2014). Given that the NMTC was allocated to businesses for capital investment, the policy is likely to increase the value of locating in eligible areas for capital intensive industries, causing these establishments to bid more for land in these areas.

The rest of the paper proceeds as follows. Section II describes in detail the specifics details of the NMTC program. Existing research on place-based tax programs and the NMTC in particular are discussed in Section III. Our empirical strategy is outlined in Section IV and in

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<sup>5</sup> Also, while eligibility for the NMTC is primarily determined based on the median income of a tract, rural areas can qualify under a few additional criteria. Rural census tracts can be eligible for the credit if there is high out-migration or if there have been significant population declines.

Section V we discuss our data. Section VI contains our results. We conclude and discuss policy implications in Section VII.

## **II. The New Markets Tax Credit<sup>6</sup>**

The Community Renewal Tax Relief Act of 2000 first established the NMTC program, and the tax credit has been renewed every year since implementation. While the program was established in 2000, the first tax credits were not allocated until 2002 (Freedman, 2012; Abravanel et al., 2013). The goal of the NMTC program was to combine government and private funds to increase investment in low-income communities by \$15 billion over the next five years (Groves, 2006; Rubin & Stankiewicz, 2005). Although the NMTC program is similar to other location-based tax incentives, it is somewhat unique in that it aims to increase investment in ‘risky’ communities by using tax credits to mitigate some of concerns. However, the tax credit is not large enough to remove all risk and is likely to avoid overinvestment (Freedman 2012).

The NMTC is allocated through a division of the U.S. Treasury department known as the Community Development Financial Institutions (CDFI) Fund.<sup>7</sup> The goal of the CDFI is to increase community development and economic opportunities for distressed areas within the United States. Since the inception of the NMTC, the CDFI fund has awarded roughly \$36.5 billion in tax credits through the program.<sup>8</sup> Table 1 provides information on the total amount allocated through the NMTC program from 2001 to 2012. According to Abravanel et al. (2013), 46% of the projects funded by the NMTC were used for office, retail, mixed use, or hotel development. The remaining projects were split up as follows: 22% to social services,

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<sup>6</sup> The information from this section, unless otherwise cited, comes from resources found at [www.cdfifund.gov](http://www.cdfifund.gov).

<sup>7</sup> For more detailed information of the CDFI fund please see [http://www.cdfifund.gov/who\\_we\\_are/about\\_us.asp](http://www.cdfifund.gov/who_we_are/about_us.asp).

<sup>8</sup> Specific statistics on the allocation of the tax credit were taken from the CDFI’s website, [www.cdfifund.gov](http://www.cdfifund.gov).

educational, or cultural/arts use, 18% to manufacturing, industrial, or agricultural uses, 9% to health facilities, and 5% to housing. The CDFI administers tax credit allocations to qualified Community Development Entities (CDEs) which then disperse the funds to private capital investments in targeted areas (Freedman 2012, Abravanel et al. 2013, Freedman 2013).

CDEs consist of domestic corporations or partnerships that serve as intermediaries between investors and Low-Income Communities (LICs). In order to qualify as a CDE, a corporation or partnership must apply for certification through the U.S. Treasury's CDFI fund.<sup>9</sup> Only businesses listed as corporations or partnerships for federal tax purposes are eligible for CDE certification.<sup>10</sup> Once certified as a CDE by the CDFI fund, the certification remains valid for the lifetime of the business provided it continues to comply with specific requirements. The certification requirements detail only what is required to qualify as a CDE. Additional requirements and reports may be obligatory to receive the tax credit depending on the type and amount of investment a CDE receives.

To meet the certification requirements, the primary focus of a CDE must be to increase the amount of capital investment available to LICs. More specifically, at least 60 percent of the firm's financial activity is required to be directed to LICs.<sup>11</sup> In addition, qualification as a CDE is contingent upon community-resident representation on any advisory board within the organization (Freedman 2012). The purpose of the advisory board requirement is to ensure accountability to the residents of the LICs. CDEs accept qualified equity investments for use in low-income communities from private investors and in turn supply those investors with the

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<sup>9</sup> For more information on the CDE certification process, please reference the CDE certification application found at [http://www.cdfifund.gov/docs/certification/CDE/CDE%20Certification%20Application\\_01222013.pdf](http://www.cdfifund.gov/docs/certification/CDE/CDE%20Certification%20Application_01222013.pdf)

<sup>10</sup> Limited liability companies and sole proprietorships are not eligible for CDE status. Government entities listed as partnerships or corporations for Federal income tax purposes are eligible to apply for CDE certification.

<sup>11</sup> See <http://www.cdfifund.gov/docs/certification/CDE/CDEcertificationFAQs.pdf> for more information on the rules regarding the allocation of tax credits to census tracts.

NMTC funds. If awarded a NMTC allocation, individual investors receive a federal income tax credit totaling 39% of the initial investment over seven years.

When the NMTC program was initially created, a census tract could qualify as a LIC if it met one of two criteria. The first criteria is based on the median income of the tract. Non-MSA census tracts are eligible for LIC designation if the ratio of the census tract median family income (MFI) to state MFI is less than or equal to 80%. Census tracts located within an MSA qualify for LIC status if the ratio of the tract MFI to the larger of the state or MSA MFI, is less than or equal to 80%. The second criteria under which a census tract could qualify is based on the poverty rate of the tract. Tracts with poverty rates of 20% or higher are designated as LICs.

In 2004, a revision was made to the NMTC program that added two additional qualification criteria – the low-population criteria and the out-migration criteria. A tract qualifies on the low-population criteria if it contained less than 2,000 people, is located within an empowerment zone, and is contiguous to at least one other LIC (Freedman, 2012; Abravanel et al., 2013). A tract qualifies on the migration criteria if it is located in a rural county with high out-migration, where high out-migration occurs if in the twenty years previous to the most recent census, the net out-migration from the county is at least 10% of the county's population at the beginning of the twenty year period.<sup>12</sup> This change allowed CDEs to invest in businesses that are not located in low-income areas if these businesses serve targeted populations, where targeted populations are individuals who lack adequate access to loans or credit opportunities.<sup>13</sup> Of all the census tracts that qualified as LICs, 98% qualify on the first two criteria listed above, and the remaining 2% qualify as either low-population or high out-migration tracts (Freedman, 2012).

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<sup>12</sup> For a list of census tracts which qualify on the out-migration criteria please see [http://www.cdfifund.gov/what\\_we\\_do/resources/ListofQualifyingNMTCCEnsusTractswithinHighMigrationRuralCountiesMay12012.pdf](http://www.cdfifund.gov/what_we_do/resources/ListofQualifyingNMTCCEnsusTractswithinHighMigrationRuralCountiesMay12012.pdf)

<sup>13</sup> See [www.cdfifund.gov](http://www.cdfifund.gov) for more information on the different targeted populations.



## **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 within a jurisdiction, 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.”<sup>14</sup>

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 incentivize businesses to locate in a specific area. Glaeser (2001) argues that attracting new businesses to an area will generate economic surplus for current residents in the targeted area. Furthermore, he suggests that offering location-based tax incentives may be justified as it compensates 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 at all levels of government offer location based tax incentives to attract new establishments to a specific jurisdiction.

Numerous papers have looked at the impact of various types of government policy 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 policy. Other researchers have used establishment

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<sup>14</sup> 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).

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

### *Sectorial Variation in Business Location*

While an extensive literature has examined the relationship between firm location and local economic policy, it is possible that the effect of different programs varies based on the specifics of the policy and the degree to which the industry is labor or capital intensive. This relationship was formalized by Hanson and Rohlin (2011b) who examined the impact of Enterprise Zones (EZ) on where businesses located based on the industry of the establishment. The EZ program is a tax credit given to businesses to locate in struggling areas and to hire workers from that area, causing the program to be a tax credit on labor. Hanson and Rohlin (2011b) developed a theoretical model that showed that more labor intensive industries, such as retail and services, will be willing to bid more for land to locate in those areas that qualify for the EZ tax credit than more capital intensive industries, such as manufacturing. The results of their analysis support this theoretical model, and suggest that there are differential effects of the policy based on how capital or labor intensive the industry is.

Unlike the EZ program, the NMTC program is a tax credit given to businesses to make capital investments in targeted low-income communities. Therefore, our analysis builds off the work of Hanson and Rohlin (2011b) by testing if this capital tax credit also has a heterogenous

effect across the different types of industries. We expect that a census tract that qualifies to receive the NMTC will likely attract those industries that are more capital intensive than those industries that are more labor intensive.<sup>15</sup> This prediction is consistent with the standard urban model, where the industry that values locating in a specific area the most will bid the highest for land in that jurisdiction.

### *New Markets Tax Credit*

First implemented in 2001, the NMTC has been renewed every year since it was enacted by Congress. Despite the overwhelming support for the program, little research exists examining the economic impact of this program. Gurley-Calvez et al. (2009) analyze whether there is an increase in new investment as a result of the NMTC or if investors simply reallocate investment intended for a non-qualifying 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.<sup>16</sup>

Freedman (2012) examined the impact of the NMTC on the communities to which the tax credit was allocated. To address the endogenous selection process, he uses the income eligibility criteria as exogenous variation to determine whether the NMTC program caused improvements in the LICs to which the credit was utilized. Using census tract level data to examine several neighborhood outcomes, he finds that the NMTC program has some positive impacts for the targeted communities, such as reductions in the unemployment rate and poverty rate.

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<sup>15</sup> Patrick (2014) looked at the impact of capital subsidies, versus tax credits, and found that effects of the subsidies varied across industries in a manner similar to our results.

<sup>16</sup> Rubin & Stankiewicz (2009) and Hicks & Faulk (2012) also provide evidence that the NMTC created investment in those areas that were eligible for the credit. However, their analysis did not address the endogenous selection of which investments receive the tax credit.

Freedman (2013) explores another possible 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 (2013) examines whether NMTC eligibility affects the distribution of employment across residents of LICs. His results suggest that to the extent that new jobs are created in these targeted communities, few go to residents of the low-income areas that were targeted. However, the findings do not account for the possibility of improvements in LICs as a result of the new investment through mechanisms other than employment effects.

We contribute to this growing literature and test whether or not the NMTC attracts new businesses to LICs. In addition, we look at how this effect varies across different types of industries, given that the NMTC is a capital investment tax credit and is likely to have a heterogenous effect across different types of businesses. Although previous studies examined the impact of the tax credit on new investment, employment, and neighborhood characteristics in the eligible communities, no studies to date have provided evidence of a relationship between NMTC eligibility and the creation of new businesses. Furthermore, no work thus far has used this capital tax credit to examine how the impact of the policy may vary across industrial sectors.

### **III. Empirical Strategy**

When estimating the effect of the NMTC on business location decisions, there are two selection processes that must be considered. First, businesses select locations based on various local attributes, many of which are unobservable. Second, not all applicants received the tax credit, so simply comparing those that received the credit to those that did not is problematic as businesses are likely to select locations based on their growth potential. To address these concerns, we draw

upon a plausibly exogenously eligibility cutoff that determines whether or not a census tract is eligible to receive the NMTC. We do not consider whether or not a specific business received the tax credit, we only consider if more businesses locate in eligible versus ineligible tracts. Given that the goal of the program is for the NMTC recipients to drive future growth, the overall effect on the number of new establishments is important to consider.

As described above, to be eligible to receive the NMTC, the ratio of the median income in a given census tract to the state median income must be less than 0.80.<sup>17</sup> We draw upon this exogenous cut-off in eligibility for the tax credit and compare activity in tracts that were eligible to those that were ineligible. Using data on whether or not a census tract is eligible for the tax credit, we initially run the following regression across all census tracts:

$$y_{i2} - y_{i1} = \beta_1 \text{elig}_i + \beta_i (X_{i2} - X_{i1}) + \gamma_j + \varepsilon_{it}.$$

Where  $i$  indicates a census tract, 2 designates the year following the enactment of the NMTC, which may be 2002, 2004, or 2006 and 1 designates 1994.  $y_{i2} - y_{i1}$  is the difference over time within a given census tract in the number of new businesses, and  $X_{i2} - X_{i1}$  is the first difference of other socio-economic attributes of the tract, including percent black, percent Hispanic, average age, average income, education measures, and percent female. We also include industry fixed effects,  $\gamma_j$ , at the two-digit SIC code. Our variable of interest is  $\text{elig}_i$ , which indicates whether or not a specific census tract is eligible for the NMTC.  $\varepsilon_{it}$  is an idiosyncratic error term.

However, when looking at where businesses locate, there are likely to be unobservable attributes of the local jurisdiction that affect where new enterprises open (Puga, 2010; Rosenthal

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<sup>17</sup> For tracts located in MSAs, eligibility is established based on the state median income or the MSA median income, whichever is lower. We account for this distinction in our analysis but for ease of discussion only mention the state median income in the text.

& Strange, 2003, 2005; Arzaghi & Henderson, 2008; Duranton & Puga, 2004). Businesses are likely to prefer areas that are growing over struggling or declining jurisdictions. Therefore, when we run the above regression for the entire sample, there are likely to be unobservable local attributes that are correlated with business location decisions that may bias our estimates.

To control for these unobservable variables, we draw upon a plausibly exogenous cutoff set by the government regarding eligibility for the NMTC program and compare census tracts that are just eligible for the tax credit to those that are just ineligible. By using this boundary, we are able to compare similar areas and control for unobserved attributes of the locality. Recall that for a tract to be eligible for the NMTC, the ratio of the median family income in that census tract to the state median family income has to be less than or equal to 0.80. We draw upon this cutoff in the income eligibility criteria and compare census tracts with an eligibility ratio just above and just below 0.80, as these areas are likely to have similar unobservable characteristics.<sup>18</sup> Initially, we restrict the sample to those tracts with a ratio between 0.70 and 0.90, and then further restrict the sample to those tracts with a ratio between 0.79 and 0.81.<sup>19,20</sup>

#### **IV. Data**

We use two primary data sets for our analysis. First, we use 1990 and 2000 Census data to control for local attributes of each census tract. Because eligibility for the NMTC was determined in 2000, we use the 2000 Census data to create our eligibility ratio. Table 2a

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<sup>18</sup> Similar boundary type regressions have been used in other applications in the literature, such as Holmes (1998), Levitt (1998), and Black (1999).

<sup>19</sup> 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 criteria 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 criteria. Therefore, since the poverty rate criterion does not appear to be the determining factor for eligibility in the NMTC, we focus only on the median income eligibility criteria.

<sup>20</sup> Data on where the individual investments were made is not publically available. It is possible to obtain information on the address of the CDEs, but we are unable to determine which tracts the investments were made.

presents the 1990 summary statistics for tracts that were eligible to receive the NMTC as well as those that were ineligible. As we can see, these two groups are substantially different across many observable characteristics. Those tracts that are eligible for the tax credit tend to have higher unemployment rates, higher percentage of the tract that is black and Hispanic, lower average income, and lower educational levels. Therefore, looking at the entire sample of tracts that are eligible versus those that are not is likely to produce biased estimates, as there are likely to be unobservable attributes of the neighborhood that affect the decisions of business owners.

To address this concern regarding unobservable local attributes, we utilize a regression discontinuity research design. We compare tracts that are just above the 0.80 income eligibility ratio to those that are just below the cutoff. In Table 2b, we compare those tracts that have a ratio of 0.70 to 0.80 and those tracts with a ratio of 0.80 to 0.90. As shown in this table, these tracts are relatively similar, suggesting that by focusing on tracts right near the income eligibility ratio boundary, we are better able to control for unobserved local attributes that may bias our results.

The second data set used is the Dun and Bradstreet (D&B) Marketplace files for the second quarter of 1994, 2002, 2004, and 2006.<sup>21</sup> This data is collected by Dun and Bradstreet and was obtained aggregated to the ZIP code level. We convert the ZIP code level data to year 2000 census tract geography using GIS software.<sup>22</sup> We transform the D&B data to the tract level because census tract median income is the criteria used to determine eligibility for the NMTC program. The D&B data contains a wealth of information on businesses. This includes detailed

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<sup>21</sup> The D&B data includes nearly all establishments apart from part-time schedule-C filers. The data have been used in a number of studies including Rosenthal and Strange (2001, 2003, 2005) and Rosenthal and Ross (2010). Kolko and Neumark (2010) and Kolko (2012) use a panel version of the data referred to as the National Establishment Time-Series (NETS) that was jointly developed by Don Walls and Dun and Bradstreet.

<sup>22</sup> To make such a conversion, we assume that the businesses within a given ZIP code are uniformly distributed throughout the area.

information on the industry to which each establishment belongs (based on the establishment's Standard Industrial Code), the number of employees, how long the business has been in operation, and sales information.<sup>23</sup>

Table 3a provides summary statistics of new and existing business activity in all eligible tracts versus all ineligible tracts. The first two rows contain the mean and standard deviation for businesses in all industries, then we stratify the new and existing businesses by industry type – manufacturing, wholesale, retail, FIRE (financial, insurance, real estate), and services. As we can see, those tracts that are not eligible for the NMTC have more business activity in general than those that are eligible across all industries, as well as for each specific industry. This suggests that the benefits of agglomeration between the eligible and ineligible census tracts are likely to be different and thus the groups are not comparable.

Just like with Table 2b, in Table 3b we restrict our sample to those tracts with an income eligibility ratio between 0.70 and 0.90. When we restrict our sample to just those tracts that are slightly above the income eligibility cutoff to those that are slightly below the cutoff, we see that these tracts are more similar regarding the number of new and existing businesses. The pattern is consistent when we consider all industries, as well as when we focus on each industry separately. Overall, the summary statistics in Tables 2a and 3a suggest that comparing all eligible tracts to all ineligible tracts is likely to be confounded by unobservable attributes. When we restrict our sample to those tracts just above and just below the eligibility ratio, as we do in Tables 2b and 3b, we have a set of census tracts that appear relatively similar and are more likely to be comparable to one another.

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<sup>23</sup> The D&B data includes information on employees working within an establishment. However, for many businesses the employment data is not reported and appears as a zero. For this reason, we focus on the number of establishments throughout this paper versus using the employment data.



## V. Results

### *Impact of the NMTC on New Businesses*

We begin by looking at the impact of eligibility for the NMTC on where new businesses locate. Throughout this discussion, we will define a new business as an establishment that has been open for less than one year. As mentioned earlier, we do not have information on whether or not a specific business received the tax credit. Therefore, we only use whether or not a given tract is eligible for the NMTC as exogenous variation in where all new businesses locate. While the decision of which investment projects receive the tax credit is subject to a political process that may be endogenous, eligibility for the NMTC, which is based on census tract characteristics, is likely to be exogenous.

We first consider all census tracts in the United States. Results from this analysis are presented in Table 4. Panel A contains the results comparing 1994 to 2002, right after the NMTC was implemented and the credits began to be allocated. Panel B compares 1994 to 2004, and Panel C compares 1994 to 2006. Robust standard errors are reported in parenthesis under each coefficient. All models include neighborhood controls, as well as fixed effects for the two-digit SIC code and MSA fixed effects.<sup>24</sup>

When looking at the entire U.S., we find a negative and statistically significant effect in all years. This finding suggests that new businesses are less likely to locate in tracts that are eligible for the NMTC. This is not surprising, as we are including all tracts in the U.S., which are likely to have different unobserved local attributes that would bias our results. In Column (2) we focus on those businesses located in tracts just near the 0.80 income eligibility cutoff, specifically those with an income eligibility ratio between 0.70 and 0.90. We still obtain a

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<sup>24</sup> The neighborhood attributes included as controls are percent female, percent black, percent Hispanic, average age, measures of educational attainment, average income, unemployment rate, and the percent of households that have a female head of household and children. All of these variables are at the census tract level.

negative coefficient, but this effect is only statistically significant in 2006. When we further restrict the sample to those tracts with an eligibility ratio between 0.79 and 0.81, we find a positive but statistically insignificant effect of eligibility for the tax credit on the number of new businesses that locate in that census tract in 2002 and 2004. We still get a negative and significant effect for 2006, though the value of the coefficient is approaching zero.

Next, we restrict our sample to only MSAs. We focus on these areas only for several reasons. First, the way that eligibility for the NMTC is determined is not consistent across urban and rural areas. For example, a rural tract can be eligible for the NMTC because of high out-migration. Additionally, the income eligibility ratio for tracts within an MSA is calculated slightly different from those tracts that are not in an MSA. Furthermore, there is an existing literature on how growth in urban regions versus rural regions is fundamentally different and thus these areas should be examined separately (Partridge, Rickman, and Li, 2009; Hammond & Tosun, 2010; Stephens & Partridge, 2011; Rupasingha & Goetz, 2013; Stephens, Partridge, & Faggian, 2013).

Table 5 shows our results when we run the same regressions as Table 4 but restrict our sample to only those census tracts located within an MSA. When we consider all census tracts that are located in an MSA, we again find a negative and statistically significant effect of the NMTC, suggesting that the tax incentive deters businesses from locating in that jurisdiction. However, as mentioned before there are issues regarding unobservable differences between high-income tracts and low-income tracts. Therefore, we restrict the sample to those census tracts located in an MSA that have an income eligibility ratio between 0.70 and 0.90.

When we restrict the sample to those tracts near the eligibility cutoff, we find that the NMTC has a positive and statistically significant effect on where new businesses locate in 2002.

We find no statistically significant effect in 2004, but still have a negative and statistically significant effect for 2006. When we restrict the sample even further to those tracts located in an MSA with an income eligibility ratio between 0.79 and 0.81, we find that the NMTC attracts new businesses to eligible census tracts in 2002 and 2004. However, we continue to find a negative effect of eligibility for the NMTC on new businesses in 2006. Overall, our results suggest that the NMTC caused new businesses to locate in eligible census tracts in the early part of the 2000s, particularly in MSAs.<sup>25</sup> However, we consistently find that eligibility for the tax credit caused fewer businesses to locate in these low-income areas in 2006.<sup>26</sup>

#### *Impact of the NMTC on New Businesses by Industry Type*

Next, we consider how the impact of the tax credit varies across different types of industries. As noted above, the NMTC was intended for capital investments, such as office renovations and investments in capital equipment. As has been shown previously by Hanson and Rohlin (2013) and Patrick (2014), taxes and subsidies do not necessarily have the same effect across all types of industries. The effect of the policy is likely to vary across sectors, specifically if the policy provides a larger benefit to more capital intensive or labor intensive industries. Given that the NMTC was intended for capital investment, we would expect the policy to attract firms from industries that are more capital intensive, such as manufacturing, than those that are more labor intensive, such as retail and services.

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<sup>25</sup> The D&B data also contains information on the number of employees reported for each of these new businesses. However, in many cases firms do not report this information. Therefore, we consider the employment data to be a bit noisier and focus on the establishment data only for our analysis. The employment results are available from the authors upon request.

<sup>26</sup> One other concern is that the 2000 decade had a decline in business activity, followed by a period of growth, which then turned into a recession later in the decade. Given our identification strategy, we are comparing tracts that are eligible for the tax credit to those that are not eligible for the tax credit in a given year. Therefore, as long as any shocks to the economy affect these tracts in a similar manner, then such business cycle trends will not bias our estimates. While this is likely to be a concern when looking at all census tracts, it is less likely this is driving our results when we are comparing those tracts that are just eligible to those that are just ineligible.

In Table 6a, we focus on those tracts located in MSAs with an income eligibility ratio between 0.70 and 0.90 and stratify the sample by the type of industry based in the one-digit SIC code. Specifically, we consider manufacturing, wholesale, retail, FIRE (financial, insurance, and real estate), and services.<sup>27</sup> Panel A compares 1994 to 2002, Panel B uses 2004 as the post period, and in Panel C the post period is 2006. Robust standard errors are reported in parenthesis below the coefficients. We include MSA fixed effects in all models, two-digit SIC code fixed effects, as well as controls for the socio-economic attributes of the neighborhood.

As we see in Panel A of Table 6a, the positive effect of NMTC eligibility in 2002 appears to be driven by the FIRE and service industries. We do not find any statistically significant effects in 2004, and find some negative and statistically significant effects in 2006 for wholesale and services. Given that the tax credit was allocated specifically towards capital investment, one explanation of this result is that initially FIRE and services utilized the tax credit to take advantage of the investment opportunities for building space. However, as more time passed and more businesses began to take advantage of the tax credit, new enterprises in these labor intensive industries were not willing to pay as high of a price to locate in these areas. Therefore, labor intensive industries were not willing to pay as much as capital intensive industries to locate in these areas and thus were not opening as many new businesses in eligible tracts in 2006.

Table 6b follows the same structure as Table 6a but focuses on those census tracts with an eligibility ratio between 0.79 and 0.81. Looking first at the 2002 results in Panel A, we find a positive and statistically significant effect on manufacturing. Again, this is consistent with expectations, as the goal of the program was to increase capital investments and manufacturing is the most capital-intensive industry (Hanson & Rohlin, 2011b). We find no statistically

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<sup>27</sup> The remaining industry types, such as mining, agriculture, and government services, are not considered as these industries are likely to be affected most by factors other than government policy.

significant effects in 2004, but again find a positive and statistically significant effect in 2006 for manufacturing. We continue to find a negative and statistically significant effect in 2006 for services. Therefore, while the overall effect on all establishments in 2006 may be negative, the positive effect on manufacturing suggests that the NMTC, which was intended to stimulate capital investment, caused the more capital-intensive industry to outbid the more service-intensive industry for land in those neighborhoods that were eligible for the tax credit.

While the magnitude of these results may seem small, recall that the mean values by industrial sector are relatively small as well. The mean number of new manufacturing firms in a given census tract in 1994 was 0.005, suggesting that a 0.001 percentage point increase corresponds to approximately a 17% increase in the number of new manufacturing firms between 1994 and 2006. However, the mean number of new services firms in 1994 was 0.101. Therefore, the decrease in new service firms of 0.008 percentage points only corresponds to a decrease of approximately 7%.

#### *Impact of the NMTC on Existing Businesses*

Next, we examine the impact of the NMTC on existing businesses. The goal of the NMTC was to incentivize investors to allocate more investment funds in higher poverty and lower income census tracts. The investments could be directed towards new establishments, but the credits could also be used for capital investment for existing businesses as well, where we define an existing business as one that has been open for at least four years. Therefore, it is possible that the NMTC has an effect on existing businesses through increased capital investment in these establishments.

Table 7 presents the results for all existing establishments and follows the same structure as Tables 4 and 5. We focus on only those tracts located in an MSA to streamline the discussion. As we see in the first column of Table 7, established businesses were less likely to be operating in a tract that was eligible for the NMTC. Again, this is not surprising given the summary statistics presented earlier indicated that both new and existing businesses are more likely to locate in higher income, lower poverty census tracts. When we restrict our sample to tracts that are just near the eligibility cutoff, we no longer find a statistically significant effect of the tax credit. This finding suggests that receiving the NMTC for investment purposes does not have an effect on the success of existing businesses. Furthermore, given we do not find a significant effect in 2006, it does not appear that the tax credit encouraged the creation of new businesses that were ultimately more successful. However, this is still a relatively short post-implementation period and future work should consider this further.

## **VI. Conclusions and Policy Implications**

We examined the effect of the New Markets Tax Credit on business location decisions. However, there are selection issues that must be addressed. First, when firms choose where to open their new enterprise, as there are likely to be unobservable attributes of the neighborhood driving decisions. Second, not all firms that apply for the NMTC receive the credit, so there may be issues regarding which firms are selected to receive the tax credit. To address these concerns, we use a regression discontinuity design and a differencing strategy to compare census tracts just on either side of a plausibly exogenous eligibility ratio. By utilizing this exogenous cutoff, we obtain causal estimates of the effect of the NMTC on the location decisions of new businesses.

After focusing on tracts located in MSAs near the income eligibility ratio, we find that NMTC eligibility attracts new businesses to these areas in 2002 and 2004. We find a deterrent effect in 2006, but when we conduct the analysis by industry type we find this negative effect is driven by the service industry, and that there is the expected positive effect on manufacturing. This result is consistent with the existing literature that examines how the effect of policy varies across industries depending on if the industry is capital or labor intensive (Hanson & Rohlin, 2011b; Patrick, 2014). Given that the NMTC is a tax credit for capital investment, we expect the more capital intensive industries, such as manufacturing, to outbid more labor intensive industries, such as services, for land in eligible census tracts. Therefore, the negative effect for services and the positive effect for manufacturing suggest that the capital intensive industries are outbidding the labor intensive industries to locate in qualifying census tracts.

The goal of the program was to increase investment in these struggling areas, with the hope that this investment will attract more businesses and spur more growth. Overall, we find some evidence that the program was successful in attracting new businesses to these low-income areas. Our results are also consistent with the existing research regarding capital subsidies and labor tax credits as we find that the NMTC creates a sorting across space of different types of industries. Future work should consider this sorting behavior further, particularly with regards to obtaining more data after the implementation of the tax credit to determine if the program on these establishments in the long-run.

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**Table 1: Total NMTC Allocations**

Year	Total Allocation
2001-2002	\$2,485,699,042.00
2003-2004	\$3,493,786,205.00
2005	\$1,964,830,000.00
2006	\$4,099,765,000.00
2007	\$3,893,000,000.00
2008	\$4,965,000,000.00
2009	\$5,000,000,000.00
2010	\$3,475,000,000.00
2011	\$3,622,919,753.00
2012	\$3,500,000,000.00

Notes: The information on the allocations was obtained from the CDFI website, [http://www.cdfifund.gov/docs/nmtc/2014/NMTCQEI\\_Report\\_042014.pdf](http://www.cdfifund.gov/docs/nmtc/2014/NMTCQEI_Report_042014.pdf). During the first two years of the program, although Congress provided allocations to the program, no allocations were to CDEs until 2003 as start-up tasks delayed the process. The allocations awarded to the NMTC program by Congress in 2001 and 2002 were combined and awarded by the CDFI fund to CDEs in 2003. The allocations awarded to the NMTC program in 2003 and 2004 were then combined and dispersed to CDEs in 2004. See <http://www.gao.gov/new.items/d07296.pdf> for more information on the allocations awarded.

**Table 2a: 1990 Census Tract Summary Statistics**

	Eligible Tracts		Ineligible Tracts	
	Mean	Std. Dev.	Mean	Std. Dev.
Percent Female	51.47%	0.051	51.05%	0.034
Percent Black	23.87%	0.313	5.38%	0.121
Percent Hispanic	13.93%	0.227	4.74%	0.088
Average Age	34.25	5.395	35.68	4.72
Percent Some HS	20.98%	0.079	12.43%	0.062
Percent HS Graduate	31.65%	0.092	32.08%	0.103
Percent Some College	17.25%	0.072	21.56%	0.065
Percent College Graduate	12.79%	0.114	26.16%	0.162
Tract Average Income	39,365	12,496	67,166	30,056
Percent Unemployed	10.42%	0.066	4.74%	0.028

**Table 2b: 1990 Census Tract Summary Statistics**

	Ratio between 0.70 and 0.80		Ratio between 0.80 and 0.90	
	Mean	Std. Dev.	Mean	Std. Dev.
Percent Female	51.43%	0.038	51.32%	0.033
Percent Black	14.43%	0.237	9.33%	0.179
Percent Hispanic	8.84%	0.172	8.24%	0.150
Average Age	35.61	4.747	35.95	4.611
Percent Some HS	19.31%	0.061	17.23%	0.056
Percent HS Graduate	35.32%	0.085	36.08%	0.084
Percent Some College	17.73%	0.067	19.03%	0.065
Percent College Graduate	12.56%	0.086	14.93%	0.091
Tract Average Income	41,723	8,401	47,363	10,034
Percent Unemployed	8.17%	0.039	6.60%	0.030

**Table 3a: 1994 Business Summary Statistics**

	Eligible Tracts		Ineligible Tracts	
	Mean	Std. Dev.	Mean	Std. Dev.
All New Businesses	0.009	0.079	0.014	0.092
All Existing Businesses	0.851	3.576	1.284	4.022
New Manufacturing	0.005	0.051	0.007	0.062
Existing Manufacturing	0.259	1.308	0.370	1.398
New Wholesale	0.062	0.324	0.094	0.303
Exiting Wholesale	2.874	11.213	4.185	10.832
New Retail	0.045	0.147	0.068	0.186
Existing Retail	1.693	3.608	2.309	4.408
New FIRE	0.004	0.048	0.008	0.065
Existing FIRE	0.276	1.797	0.430	1.779
New Services	0.019	0.108	0.033	0.134
Existing Services	1.111	3.981	1.739	4.430

**Table 3b: 1994 Business Summary Statistics**

	Ratio between 0.70 and 0.80		Ratio between 0.80 and 0.90	
	Mean	Std. Dev.	Mean	Std. Dev.
All New Businesses	0.009	0.078	0.010	0.073
All Existing Businesses	0.494	2.346	0.552	2.131
New Manufacturing	0.005	0.049	0.006	0.051
Existing Manufacturing	0.274	1.051	0.315	1.043
New Wholesale	0.065	0.348	0.067	0.219
Exiting Wholesale	3.194	10.372	3.397	6.661
New Retail	0.050	0.152	0.060	0.170
Existing Retail	2.103	3.465	2.311	3.906
New FIRE	0.004	0.035	0.004	0.041
Existing FIRE	0.277	1.159	0.300	0.898
New Services	0.019	0.102	0.023	0.101
Existing Services	1.177	3.074	1.370	2.858

**Table 4:** Effect of New Market Tax Credit Qualification Status on the Change in *NEW* Firms in *ALL* Census Tracts

	Entire Sample	Eligibility Ratio 0.70 to 0.90	Eligibility Ratio 0.79 to 0.81
<i>Panel A: 1994 Q2 to 2002 Q2</i>			
NMTC Qualified Census Tract	-0.012*** (0.0004)	-0.0001 (0.001)	0.002 (0.001)
Controls	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes
Observations	3,758,748	971,616	124,584
R-squared	0.118	0.087	0.111
<i>Panel B: 1994 Q2 to 2004 Q2</i>			
NMTC Qualified Census Tract	-0.006*** (0.0002)	0.0001 (0.0003)	0.001 (0.000794)
Controls	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes
Observations	7,249,942	1,868,354	242,034
R-squared	0.050	0.036	0.040
<i>Panel C: 1994 Q2 to 2006 Q2</i>			
NMTC Qualified Census Tract	-0.008*** (0.0002)	-0.002*** (0.0004)	-0.002** (0.001)
Controls	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes
Observations	7,253,770	1,870,964	241,860
R-squared	0.057	0.047	0.047

Robust standard errors are in parentheses. \*\*\*, \*\*, and \* denote  $p < 0.01$ ,  $p < 0.05$ , and  $p < 0.1$ , respectively. State and industry fixed effects are included in the regressions. Control variables include the percent of the population that is female, the percent of the population that is black, the percent of the population that is Hispanic, the average age of the population, the percent of the population without a high school diploma, the percent of the population with some college, the percent of the population with a college degree, the average income, the unemployment rate, and the percent of female headed households with children within the tract.

**Table 5:** Effect of New Market Tax Credit Qualification Status on the Change in *NEW* Firms in Census Tracts in *MSAs ONLY*

	Entire Sample	Eligibility Ratio 0.70 to 0.90	Eligibility Ratio 0.79 to 0.81
<i>Panel A: 1994 Q2 to 2002 Q2</i>			
NMTC Qualified Census Tract	-0.012*** (0.001)	0.002** (0.001)	0.006*** (0.002)
Controls	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes
Observations	2,958,928	598,560	75,922
R-squared	0.134	0.108	0.148
<i>Panel B: 1994 Q2 to 2004 Q2</i>			
NMTC Qualified Census Tract	-0.006*** (0.0003)	0.0001 (0.0004)	0.002* (0.001)
Controls	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes
Observations	5,771,870	1,171,368	150,220
R-squared	0.055	0.042	0.047
<i>Panel C: 1994 Q2 to 2006 Q2</i>			
NMTC Qualified Census Tract	-0.008*** (0.0003)	-0.001*** (0.0005)	-0.003** (0.001)
Controls	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes
Observations	5,774,480	1,172,528	150,220
R-squared	0.062	0.052	0.050

Robust standard errors are in parentheses. \*\*\*, \*\*, and \* denote  $p < 0.01$ ,  $p < 0.05$ , and  $p < 0.1$ , respectively. Only tracts located within an MSA are included in this table. State and industry fixed effects are included in the regressions. Control variables include the percent of the population that is female, the percent of the population that is black, the percent of the population that is Hispanic, the average age of the population, the percent of the population without a high school diploma, the percent of the population with some college, the percent of the population with a college degree, the average income, the unemployment rate, and the percent of female headed households with children within the tract.



**Table 6a:** Effect of New Market Tax Credit Qualification Status on the Change in **NEW** Firms in a Census Tract with an Eligibility Ratio between 0.70 and 0.90 Classified by Industry.

	Manufacturing	Wholesale	Retail	FIRE	Services
<i>Panel A: 1994 Q2 to 2002 Q2</i>					
NMTC					
Qualified	-0.0002	-0.005	-0.003	0.001*	0.004**
Census Tract	(0.0003)	(0.003)	(0.002)	(0.0007)	(0.002)
Controls	Yes	Yes	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	335,040	33,504	134,016	100,512	234,528
R-squared	0.011	0.016	0.070	0.024	0.096
<i>Panel B: 1994 Q2 to 2004 Q2</i>					
NMTC					
Qualified	0.00008	-0.0009	0.0007	0.0003	0.001
Census Tract	(0.0002)	(0.002)	(0.001)	(0.0004)	(0.0009)
Controls	Yes	Yes	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	644,260	64,426	257,704	193,278	450,982
R-squared	0.003	0.004	0.013	0.017	0.049
<i>Panel C: 1994 Q2 to 2006 Q2</i>					
NMTC					
Qualified	-0.0002	-0.007***	-0.001	0.0007	-0.002**
Census Tract	(0.0002)	(0.002)	(0.001)	(0.0006)	(0.001)
Controls	Yes	Yes	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	645,160	64,516	258,064	193,548	451,612
R-squared	0.007	0.005	0.019	0.023	0.059

Robust standard errors are in parentheses. \*\*\*, \*\*, and \* denote  $p < 0.01$ ,  $p < 0.05$ , and  $p < 0.1$ , respectively. Eligibility ratio cutoff of 0.70 to 0.90 included in all columns in this table. State and industry fixed effects are included in the regressions. Control variables include the percent of the population that is female, the percent of the population that is black, the percent of the population that is Hispanic, the average age of the population, the percent of the population without a high school diploma, the percent of the population with some college, the percent of the population with a college degree, the average income, the unemployment rate, and the percent of female headed households with children within the tract.

**Table 6:** Effect of New Market Tax Credit Qualification Status on the Change in **NEW** Firms in a Census Tract with an Eligibility Ratio between 0.79 and 0.81 Classified by Industry.

	Manufacturing	Wholesale	Retail	FIRE	Services
<i>Panel A: 1994 Q2 to 2002 Q2</i>					
NMTC					
Qualified	0.002**	-0.007	-0.001	0.003	0.005
Census Tract	(0.001)	(0.009)	(0.005)	(0.002)	(0.004)
Controls	Yes	Yes	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	42,960	4,296	17,184	12,888	30,072
R-squared	0.015	0.027	0.059	0.021	0.136
<i>Panel B: 1994 Q2 to 2004 Q2</i>					
NMTC					
Qualified	0.0002	0.004	0.002	-0.001	0.002
Census Tract	(0.0005)	(0.006)	(0.003)	(0.001)	(0.002)
Controls	Yes	Yes	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	83,460	8,346	33,384	25,038	58,422
R-squared	0.004	0.005	0.007	0.015	0.052
<i>Panel C: 1994 Q2 to 2006 Q2</i>					
NMTC					
Qualified	0.001**	-0.005	-0.0007	-0.0006	-0.008***
Census Tract	(0.0005)	(0.007)	(0.003)	(0.001)	(0.003)
Controls	Yes	Yes	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	83,400	8,340	33,360	25,020	58,380
R-squared	0.009	0.006	0.015	0.015	0.056

Robust standard errors are in parentheses. \*\*\*, \*\*, and \* denote  $p < 0.01$ ,  $p < 0.05$ , and  $p < 0.1$ , respectively. Eligibility ratio cutoff of 0.79 to 0.81 included in all columns in this table. State and industry fixed effects are included in the regressions. Control variables include the percent of the population that is female, the percent of the population that is black, the percent of the population that is Hispanic, the average age of the population, the percent of the population without a high school diploma, the percent of the population with some college, the percent of the population with a college degree, the average income, the unemployment rate, and the percent of female headed households with children within the tract.

**Table 7:** Effect of New Market Tax Credit Qualification Status on the Change in **EXISTING** Firms in a Census Tract in an MSA

	Entire Sample	Eligibility Ratio 0.70 to 0.90	Eligibility Ratio 0.79 to 0.81
<i>Panel A: 1994 Q2 to 2002 Q2</i>			
NMTC Qualified Census Tract	-0.273*** (0.009)	-0.010 (0.014)	-0.025 (0.041)
Controls	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes
Observations	3,008,758	608,928	77,271
R-squared	0.213	0.212	0.220
<i>Panel B: 1994 Q2 to 2004 Q2</i>			
NMTC Qualified Census Tract	-0.063*** (0.005)	0.002 (0.008)	0.005 (0.023)
Controls	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes
Observations	5,848,438	1,190,088	152,149
R-squared	0.014	0.012	0.014
<i>Panel C: 1994 Q2 to 2006 Q2</i>			
NMTC Qualified Census Tract	-0.064*** (0.006)	0.0006 (0.008)	0.001 (0.022)
Controls	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes
Observations	5,848,438	1,190,088	152,149
R-squared	0.014	0.012	0.014

Robust standard errors are in parentheses. \*\*\*, \*\*, and \* denote  $p < 0.01$ ,  $p < 0.05$ , and  $p < 0.1$ , respectively. Only tracts located within an MSA are included in this table. State and industry fixed effects are included in the regressions. Control variables include the percent of the population that is female, the percent of the population that is black, the percent of the population that is Hispanic, the average age of the population, the percent of the population without a high school diploma, the percent of the population with some college, the percent of the population with a college degree, the average income, the unemployment rate, and the percent of female headed households with children within the tract.