Do Biases Exist in the Location of Affordable Housing? An Examination of the Low-Income Housing Tax Credit in North Carolina

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ABSTRACT

This paper first establishes the importance of the Low-Income Housing Tax Credit (LIHTC) as a subsidy for the production of affordable housing in the United States, and then examines LIHTC allocation patterns in North Carolina in an attempt to determine possible biases in the production process. Analysis of allocation data shows a strong correlation between the presence of commercial bank branches and LIHTC allocation patterns on a county-by-county basis, even after controlling for population.

Through a detailed analysis of allocation patterns and interviews with key informants in the LIHTC industry, three possible biases are suggested. First, LIHTC developers and properties may be spatially correlated due to time and cost savings as well as a need for specialized knowledge and local relationships. Second, the financial involvement of local government may be an important factor in development decisions both as a result of state finance agency regulations and implications for financial feasibility. Finally, decisions made by LIHTC investors may be playing a role in location decisions, although the extent of this role can be debated.

The production of affordable housing through the Low-Income Housing Tax Credit (LIHTC) program is neither perfectly efficient nor of sufficient scope to completely solve housing affordability problems in the United States. However, affordable housing advocates should be aware of the significant victory that the program represents for those in need of housing assistance given the climate that social programs have faced both before and since the creation of the LIHTC in 1986. The combination of an ever-worsening budgetary climate, a continued emphasis on devolution with respect to social programs formerly sponsored by the Federal government, and the shift from the provision of multifamily housing assistance to homeownership assistance by the U.S. Department of Housing and Urban Development (HUD) represent a very real threat to the survival of the LIHTC. Affordable housing advocates would be well advised to protect and maximize the efficient use of resources that are currently available from the Federal government until a political climate that allows for the expansion of social programs arises once again.

This paper examines issues surrounding the operation and survival of the LIHTC in two parts. First, the political climate surrounding affordable housing policy over the past four decades is examined, with a goal of establishing the improbability of the creation of the LIHTC as well as an argument for its importance to current affordable housing provision in the United States; and second, allocation patterns of the LIHTC in North Carolina are examined, with an eye on identifying potential program weaknesses that may need to be remedied to promote program efficiency, equity, and survival.

What is the Low-Income Housing Tax Credit, and where does it fit in current US affordable housing policy?

Created as a part of the Tax Reform Act of 1986, primarily in response to changes in real estate tax law that gutted incentives for the production of affordable housing, the LIHTC provides a means of generating equity and reducing debt service for developers who agree to maintain affordability standards in housing that they build.[1] The credit is distributed to states in a manner similar to a block grant by the U.S. Department of the Treasury, where final authority rests in the creation of guidelines for its use. Each state currently receives $1.75 of credit per capita. However, allocating authority and compliance duties lie with state allocating agencies, which tend to be quasi-public, self-supporting organizations.[2]

The LIHTC provides a 90 percent credit to its recipient over a ten-year period; in conjunction with tax benefits generated by depreciation, the LIHTC allows investors to realize a reasonable return without relying on cash flow generated by LIHTC properties. This allows developers to feasibly suppress rents to affordable levels.

The regulations set by the U.S. Department of the Treasury governing this program require that, at a minimum, units constructed using the LIHTC serve tenants earning no greater than 60 percent of Area Median Income (AMI) as determined by HUD; some state allocating agencies, such as the North Carolina Housing Finance Agency (NCHFA) have outlined more stringent and detailed income requirements. Treasury requirements

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[1] Case, Karl E. (1991). "Investors, Developers, and Supply-Side Subsidies: How Much is Enough? *Housing Policy Debate* 2(2), 341-356.
[2] Orlebeke, Charles J. (2000). "The Evolution of Low-Income Housing Policy, 1949 to 1999." *Housing Policy Debate* 11(2), 489-520.

basically require that LIHTC developments meet these requirements for a period of 30 years, although a provision allowing for exit from the program after 15 years does exist. Again, NCHFA regulations are more strict than Treasury guidelines, and do not allow for such early exits.[3,4]

Because the vast majority of developers of multifamily affordable housing neither have the cash flow needed to generate the proper amount of equity for the construction of LIHTC properties nor the need for the amount of tax credits awarded for construction, and non-profit developers cannot use tax credits because they do not pay taxes, equity is most frequently generated for these developments through the syndication process. Syndication usually involves a series of limited partnerships that utilize a third party through which credits and depreciation benefits are transferred to investors and equity is transferred to the developer of a LIHTC property. Because of a need for large amounts of tax shelter as well as investment requirements contained in the Community Reinvestment Act of 1977, commercial banks comprise a large share of LIHTC investors; Federal quasi-public mortgage agencies such as the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) are also among the credit's largest consumers.[5,6]

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[3] McClure, Kirk (2000). "The Low-Income Housing Tax Credit as an Aid to Housing Finance: How Well has it Worked?" *Housing Policy Debate* 11(1), 91-114

[4] North Carolina Housing Finance Agency (2003). "2003 Qualified Allocation Plan." Online: http://www.nchfa.org/Rental_Home/2003_QAP.htm

[5] http://www.fanniemae.com/multifamily/understanding/index.jhtml?p=Multifamily&s=Understanding+Multifamily

[6] Newcomer, Chuck (2003). Personal interview. April 11, 2003.

Increasingly, Federal affordable housing policy has moved in the direction of encouraging lower-income Americans to purchase homes rather than seek rental housing.[7] However, there are still a number of Federal programs aimed at assisting lower-income renters. Charles Orlebeke proposed that Federal rental assistance is comprised of a three-pronged approach, including tenant-based vouchers under the Section 8 program; Federally-provided and locally-administered block grants such as the Community Development Block Grant (CDBG) and HOME Investment Partnerships Program; and the LIHTC.[8]

While the first two legs of Federal strategy remain important, the argument can be made that the LIHTC is currently the most vital of the three. In the face of tremendous waiting lists for tenant-based vouchers, the Section 8 program remains vastly underfunded;[9] additionally, while most believe housing block grants to be relatively safe from the Congressional budgetary axe, the recent move to eliminate the HOPE VI program demonstrates that in the current financial climate, any program is a potential target.[10] In contrast, as will be demonstrated below, the LIHTC has not only seen its funding expanded and permanently authorized as a result of the Community Renewal Tax Relief Act of 2000,[11] but has gathered a large amount of institutional momentum that has put it in a strong position to survive.

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[7] Knutson, Lawrence L. (2001). "Bush Promotes Home Ownership Programs." *North County (CA) Times*, June 10, 2001.
[8] Orlebeke, ibid.
[9] Johnson, Amy (2003). "A $50,000 House? Hah!" *Virginia Gazette*, March 5, 2003.
[10] Begos, Kevin (2003). "HOPE VI Program is Successful, Needs Saving, Watt Says." *Winston-Salem Journal*, March 12, 2003.
[11] Complete text of the Act is available online at http://www.house.gov/kanjorski/statlang.htm

Affordable housing policy prior to 1986: the move to and back away from production

While Federal housing policy dates to the New Deal era, with the groundwork for the government's commitment to affordable housing laid down in the Housing Act of 1949 that promised "a decent home and suitable living environment for every American family," the Federal government did not truly embrace the role of housing provider until the creation of HUD in 1965 and the Housing Act of 1968.[12] The Federal government approach to solving affordable housing problems in the 1960s was to enact sweeping production programs; most notable among these were the Section 235 and Section 236 programs that provided subsidized mortgages to developers of both single-family and multifamily housing, with a goal of providing six million new subsidized units by 1978.[13] While these programs were fully funded and did rather rapidly stimulate the production of affordable housing – by 1970, the number of subsidized units under construction exceeded 400,000, a more than tenfold increase from the decade before[14] – the role of the Federal government as a generous provider of supply-side housing subsidies did not last very long.

In 1971, the *President's Third Annual Report on National Housing Goals* raised concerns about these programs on a number of grounds. First, because of a structure that relied on long-term debt, the cost of these programs was moderate in the programs' early stages, but would grow at an alarming rate as the number of subsidized properties increased. Federal obligations were projected to be as high as $200 billion by the time payments

[12] Orlebeke, ibid.
[13] Schussheim, Morton J. (1969). *Toward a New Housing Policy: The Legacy of the Sixties.* New York: Committee For Economic Development.
[14] Orlebeke, ibid.

were completed. Second, problems of abandonment and urban decline were cited; these problems were largely fueled by suburban flight, though the concentration of subsidized housing in urban areas presumably contributed to them as well. Finally, the point was made that even if the goal of producing six million new subsidized units were met, less than one quarter of families then qualifying for subsidized housing would find housing under these programs.[15]

In response to these concerns and rapidly dwindling support for these programs, the Nixon administration placed a moratorium on funding for these programs in early 1973. While Section 235 and 236 properties were still built until mid-1974, the stream of Federal funding for the production of affordable housing was essentially cut off and would be radically restructured over the next decade and a half.[16]

Setting the stage for the role of the LIHTC as the dominant production program

While the period between the Nixon administration moratorium in 1973 and the Tax Reform Act of 1986 did not see a complete cessation of production subsidies for affordable housing, there was a marked shift in emphasis on the Federal level from supply-side subsidies to demand-side subsidies.[17] Tenant-based assistance in the form of vouchers was first introduced in a very limited form under the Section 23 program in 1965; however, it was not until the Section 8 program was created in 1974 that such assistance became a major portion of the affordable housing landscape.[18]

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[15] Orlebeke, ibid.
[16] Orlebeke, ibid.
[17] Orlebeke, ibid.
[18] Case, ibid.

The first years of Section 8 saw an emphasis on what was then called the “Existing Housing” component of the program that provided housing allowances to qualifying lower-income tenants. Still, the “New Construction” and “Substantial Rehabilitation” components of Section 8 quickly became the dominant uses of program funding, and remained a large source of affordable housing supply during the Carter administration. However, in 1982, the same set of problems that had led to the demise of the Section 235 and 236 programs did in project-based Section 8 funding; citing the high cost of a growing number of Section 8 contracts as well as the absence of need for production programs given the developer-friendly tax code of the time, Congress rolled nearly the entirety of Section 8 funding into tenant-based vouchers. Now bearing the label of “Housing Choice Vouchers,” the program remains a major component of the national affordable housing strategy.[19]

Despite the lack of direct supply-side subsidies for affordable housing after 1982 – little more than the ability of state and local authorities to issue tax-exempt housing bonds existed after Section 8 moved away from production subsidies – the real estate tax code encouraged the production of multifamily housing in particular, with special provisions providing additional benefits to the owners of low-income housing. As estimated by Karl Case, developers could pass benefits equal to approximately 15 percent of a project’s costs to a limited partner through depreciation alone. Statistics showing the number of multifamily housing starts for this period support these claims, with an increase of 29

[19] Case, ibid.; Orlebeke, ibid.

percent shown for the period spanning 1983-1986 over what had been recorded from 1976-1979.[20]

How the Tax Reform Act of 1986 – and the LIHTC – came to be

Considered to be the most radical tax reform legislation since the New Deal era, the Tax Reform Act of 1986 (TRA 86) radically changed the landscape of the real estate tax code and allowed for the re-emergence of supply-side affordable housing subsidies through the creation of the LIHTC.

An unlikely coalition supported TRA 86, led by President Reagan, who was eager to provide yet another large income tax cut to his constituents after having slashed the marginal Federal income tax rate for the uppermost bracket from 70 to 50 percent under the Economic Recovery Tax Act of 1981.[21] This support came even at the risk of closing some of the more lucrative loopholes available to his party's strongest backers, including those embedded in the real estate tax code. Joining Reagan from the right was a group of free-market Republicans, led by Jack Kemp, trying to advance an agenda that would ostensibly advance economic efficiency by eliminating distortions created by loopholes while inducing investment through tax cuts; from the left, many Democrats in Congress joined the reform bandwagon, largely because they feared being left out of the spotlight

[20] Case, ibid.
[21] Case, ibid.; Conlan, Timothy J., Margaret T. Wrightson, and David R. Beam (1990). *Taxing Choices: The Politics of Tax Reform.* Washington, D.C.: Congressional Quarterly.

sure to be enjoyed by successful reformers, but also because TRA 86 proposed a dramatic hike in the corporate tax rate to replace revenues lost by cuts in income taxes.[22]

This broad coalition that supported TRA 86 was not only the key to its enactment, but also is thought by some to be the reason why such a broad series of reforms were made despite the fact that no single provision contained in the legislation was thought to have the political support for passage.[23] The need for such a coalition was also a key to the inclusion of the LIHTC in the legislation; in the context of Reagan-era bellicosity towards social program funding in general and affordable housing specifically, the fact that billions of dollars in annual tax expenditures were devoted to the program can be considered a significant victory for affordable housing advocates.[24]

While some legislators who ultimately supported TRA 86 would ordinarily have fought against the inclusion of the LIHTC, a case can be made that a fairly broad coalition had good reason to stump for its creation. Most obviously, urban Democrats, primarily from the northeast part of the country, were eager to protect affordable housing programs that had traditionally brought Federal dollars to their districts.[25] Making matters worse for this group was the fact that the budget that Reagan had proposed for 1987 had both eliminated funding for the Section 202 program, which had funded housing for special needs populations, as well as for the Section 515 program administered through the

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[22] Birnbaum, Jeffrey H. (1987). *Showdown at Gucci Gulch: Lawmakers, Lobbyists, and the Unlikely Triumph of Tax Reform.* New York: Vintage.
[23] Birnbaum, ibid.
[24] Orlebeke, ibid.; Stegman, Michael A. (1991). "The Excessive Costs of Creative Finance: Growing Inefficiencies in the Production of Low-Income Housing." *Housing Policy Debate* 2(2), 357-374.
[25] Case, ibid.

Farmers Home Administration that provided low-cost loans for affordable housing in rural areas; the previously urban-focused HUD was to be forced to share its housing budget with rural areas to make up the difference.[26] As a result of the latter development, backers of the LIHTC were probably able to draw greater support from members of Congress representing low-income rural areas than had affordable housing legislation that flowed through HUD.

Meanwhile, Republican support was encouraged by the design of the LIHTC program, which appeals to the New Federalist spirit that has dominated politics on the Federal level for the past two decades, through the devolution of program control from HUD to state allocating agencies.[27] Additionally, the wave of scandals endured by HUD in the late 1980s and early 1990s had just started to surface by the time TRA 86 was proposed; to the Reagan administration, which had already displayed a pugnacious attitude towards HUD through budget decisions, giving HUD as little Federal-level control over the program as possible must have been appealing.[28]

Finally, support for the LIHTC came from outside of Congress as well. With reform in the real estate portion of the Federal tax code, incentives for the production of affordable housing through depreciation fell through the floor, dropping from roughly 15 percent of project cost to just under 2 percent.[29] This was not only bad news for affordable housing advocates, but also to the construction and real estate industry at large; absorbing an

[26] Stegman (1991), ibid.
[27] Orlebeke, ibid.
[28] Welfeld, Irving (1992). *HUD Scandals: Howling Headlines and Silent Fiascoes.* New Brunswick, NJ: Transaction.
[29] Case, ibid.

inevitable decline in real estate investment was to be difficult enough, but for developers who had learned to take advantage of Federal funding from programs such as Section 236 and the production side of Section 8, a new source of funding was essential.[30]

In the end, TRA 86 passed by a comfortable margin; despite its importance, a procedural error allowed passage without a roll call vote, which leaves us unable to discern precisely which members of Congress stood behind the legislation when the dust had settled.[31] Regardless, this piece of legislation – both through its effect on tax benefits to real estate investors as well as through the creation of the LIHTC – has shaped the production of affordable housing for the past 17 years.

The evolution of the LIHTC and its supporting institutions that have led to its survival

Originally, the LIHTC was scheduled to sunset after three years, which required Congress to reauthorize the program. Starting in 1989, Congress did extend the program, though only for one year at a time. While this may have harmed the program's ability to attract investors due to uncertainty surrounding its survival, it did allow Congress to repair elements of the program that had been problematic byproducts of its last-minute, *ad hoc* creation, such as the oversubsidy of developments and the relatively short time (15 years) originally required for LIHTC properties to remain in compliance with income standards.[32]

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[30] Orlebeke, ibid.; Stegman (1991), ibid.
[31] Birnbaum, ibid.
[32] McClure, ibid.

The turning point for the LIHTC came in 1993, when the program was permanently reauthorized by a still-Democratic Congress with support from the free-market Clinton administration. With program continuity essentially ensured, the intermediaries and developers that would become the backbone of the LIHTC development industry aided the drive to make the program more efficient; in conjunction with improvements made by state allocation agencies in setting regulations and standards, this has cut the cost of securing equity from investors from roughly 50 to 25 cents on every dollar.[33]

Again, it is important to note that the LIHTC has not only survived a period of budgetary contraction that was particularly harsh towards social programs, but is now permanently authorized and actually received a 40 percent increase in per capita funding under the Community Revitalization Tax Act of 2000.[34] We cannot underestimate the importance of the institutions that have grown up in response to this legislation as a primary reason for its success.

The range of groups that now comprise the coalition supporting the LIHTC is diverse and powerful. Included are state and local governments, which have simultaneously been thrust into increasingly tight budgetary environments and saddled with a greater share of the funding burden for the provision of services and infrastructure. As problems of housing affordability persist, state legislators will remain eager to protect any stream of Federal funding aimed at addressing this problem.

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[33] McClure, ibid.; Stegman, Michael A. (1999). "Comment on Jean L. Cummings and Denise DiPasquale's 'The Low-Income Housing Tax Credit: An Analysis of the First Ten Years': Lifting the Veil of Ignorance." *Housing Policy Debate* 10(2): 321-332.

[34] Stegman (1991), ibid.; Patashnik, Eric (2000). *Putting Trust in the U.S. Budget.* New York: Cambridge University Press.

In addition to political actors, a powerful group of for-profit and nominally non-profit business interests have evolved to take advantage of this source of funding. First, there is evidence from research on the LIHTC that the majority of properties produced under this program are developed by contractors that deal specifically with equity derived from the sale of credits.[35] In addition, a relatively small number of syndicators, including national players such as the Enterprise Social Investment Corporation and the Local Initiatives Support Corporation, as well as regional or local syndicators such as the Community Affordable Housing Equity Corporation, based in North Carolina, have come to depend on income generated from the syndication of the LIHTC.[36] These organizations can exploit specialized knowledge, as well as relationships with state allocating authorities and large institutional investors, such as the banks that rely on LIHTC deals to satisfy requirements under the Community Reinvestment Act of 1977, to best make use of the program. Evidence of the power of this group of organizations can be taken from the amount of influence they hold with the Department of the Treasury; during the process of setting regulations for the New Markets Tax Credit (NMTC), the commercial cousin of the LIHTC, many of these same groups submitted suggestions that were eventually adopted in the NMTC Treasury regulations.[37]

The presence of this coalition, in addition to the continuing harsh budgetary environment expected to face social programs into the foreseeable future, has led many housing

[35] McClure, ibid.
[36] Orlebeke, ibid.; Cummings, Jean L., and Denise DiPasquale (1999). "The Low-Income Housing Tax Credit: An Analysis of the First Ten Years." *Housing Policy Debate* 10(2): 251-307.
[37] Kiddoo, David (2003). *Regulatory Challenges to the New Markets Tax Credit and New Markets Venture Capital Programs.* Unpublished manuscript.

advocates to suggest that the LIHTC is the future of the production of affordable housing.[38] I would like to agree, and suggest that not only do I believe that other affordable housing production programs will not garner Federal funding in the near future, but also that the LIHTC will continue to be a well-supported program.

Does reliance on the private sector leave policymakers with too little control over the location of LIHTC properties?

Due to the administrative structure of the LIHTC – state allocating agencies evaluate individual projects on criteria largely related to financial feasibility[39] – policymakers retain a relatively small amount of control with respect to the location of LIHTC properties.[40] Policies governing allocation decisions are a part of the Qualified Allocation Plans that these allocating agencies draw up, with "set-asides" ensuring that a portion of credits are used for developments that meet criteria related to the geographic location of a property, the for-profit or non-profit status of the developer, and the income level of the county or census tract in which a property is located. However, the presence of these set-asides may not guarantee that a large amount of control over the distribution of credits is retained by the government.

Using a series of statistical analyses, the remainder of this paper examines possible bias in the LIHTC program stemming from the reliance on the private sector for the production of affordable housing developments by posing the following research question: does the lack of access to the developers and investors who comprise the

[38] Stegman (1999), ibid.; Orlebeke, ibid.
[39] Shelburne, Mark (2003). Personal interview. April 10, 2003.
[40] Orlebeke, ibid.

specialized production infrastructure of LIHTC properties prevent some locations from receiving their fair share of affordable housing through this program?

Due to data availability, the county level has been chosen as the geographical unit of analysis for this study. Additionally, because of the role that commercial banks play in providing both equity and debt capital for LIHTC projects, the analyses used in this paper consider the number of commercial banks in a county as an appropriate proxy for the presence of the LIHTC infrastructure.

Overview of the data

LIHTC allocation data were taken from the North Carolina Housing Finance Agency database of LIHTC properties in North Carolina. Federal and state credit amounts were aggregated by county and expressed as the sum of allocations for all projects. While the NCHFA data indicated whether or not each project received Section 515 funding from the U.S. Department of Agriculture, the amount of Section 515 funding for each project was not indicated; therefore, the amount of Federal LIHTC allocations for projects using Section 515 funding was used as a proxy. Credit amounts were calculated for the allocation cycles from 1986 to 2002.

Data for the number of commercial bank branches by county was taken from the Federal Deposit Insurance Corporation (FDIC), and represent totals from June 2000. County population levels and the number of housing units built 1995 and after were taken from the U.S. Bureau of the Census 2000 Summary File 3 (SF 3).

After all the data were aggregated by county, the study comprised 100 data points (one for each county in North Carolina). In these counties, 1716 LIHTC allocations were made between 1986 and 2002, with 247 projects also receiving Section 515 funding and 81 receiving state credits.

Discussion and presentation of the regression models

Model 1 – the primary model in this analysis – uses Federal LIHTC allocations per capita as the dependent variable, with the number of commercial bank branches, the sum of Federal LIHTC allocations for projects receiving Section 515 funding, and the sum of state LIHTC allocations as dependent variables. As is the case in all of these models, the county is the unit of analysis.

In **model 2**, Federal and state allocations are added together and considered on a per capita basis as the dependent variable; by design, the state credit is intended to provide a disproportionately large benefit to lower-income counties,[41] and may make projects in such locations relatively more attractive by reducing the amount of debt financing that may be needed for development of a LIHTC property. The independent variables include the number of commercial bank branches and the sum of Federal LIHTC allocations for projects receiving Section 515 funding. All relationships are expected to be positive. **Model 3** transforms the dependent variable used in model 2 and subtracts allocations made for projects that received Section 515 funding. This isolates projects that do not draw from this obvious source of Federal funding. The number of commercial bank

[41] NCHFA, ibid.

branches remains as the only independent variable, and the relationship between the variables is expected to be positive.[42]

Overview of descriptive statistics

The population of North Carolina is somewhat concentrated in a handful of counties – nine of the state's 100 counties comprise 38 percent of the state's population.[43] Given the correlation between population and many of the most important variables in this analysis, it should not be surprising that many of the variables show descriptive statistics that indicate a "long right tail," with a handful of data points well outside of the normal distribution and a standard deviation that exceeds the mean.

Highlights include a mean of 22.9 commercial bank branches per county, with more than half of the counties in North Carolina having 13 or fewer branches, while 225 branches are located in Mecklenburg County alone. The mean sum of Federal LIHTC allocations per county is $1,541,134.90, which far exceeds the standard deviation of 4,460,409.31. While the distribution of Federal LIHTC allocations per capita also possesses a long right tail, it is not as pronounced as that of the distribution of commercial banks by county. Descriptive statistics are summarized in **Table 1** below.

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[42] Originally, the data for these models were divided using a dummy variable for the time periods of 1986-1996 and 1997-2002; this split was meant to reflect LIHTC program refinements that had taken place both at the Federal and state levels. However, this variable proved to be insignificant as an independent variable, and similar effects were noted when the same preliminary models were run for both groups of data. As a result, data for all years was rolled into a single model. This also had the effect of reducing the number of counties that did not receive any allocations to three. The decision to transform allocation variables into per capita figures was made in response to an obvious and highly significant correlation between those variables, as well as the number of commercial bank branches per county, and population. By using per capita figures in the dependent variables, the possibility of colinearity has been reduced.

[43] These are all the counties in North Carolina with a population in excess of 150,000, and include Buncombe, Cumberland, Durham, Forsyth, Guilford, Mecklenburg, New Hanover, Onslow and Wake.

Table 1. Descriptive statistics.

n = 100	Mean	Min	Max	SD
Number of commercial bank branches per county	22.90	1	225	33.50
Number of commercial bank branches per capita per county	.000291	.000085	.000687	.000095
Sum of Federal LIHTC allocations per county	$1,541,134.90	$0	$39,221,914	4,460,409.31
Sum of Federal LIHTC allocations per capita per county	$13.76	$0	$62.47	10.38
Sum of state LIHTC allocations per county	$91,134.32	$0	$1,014,516	152,147.73
Sum of state LIHTC allocations per capita per county	$1.46	$0	$9.14	2.28
Sum of Federal LIHTC allocations to projects receiving Section 515 financing per county	$148,399.99	$0	$1,049,957	195,157.70
Sum of Federal LIHTC allocations to projects receiving Section 515 financing per capita per county	$3.38	$0	$17.96	3.99

Summary of the regression models

The primary model used in this analysis is **model 1**. Despite having only three independent variables, none of which has an obvious relationship to the dependent variable, the model has a strong adjusted r^2 of .348, and also shows a highly significant F-statistic of 17.072. Additionally, among the independent variables, the number of commercial bank branches shows the strongest correlation at r = .430; this is significant at $p < .005$. Even when an attempt to remove factors that may contribute to the strong correlation between the number of commercial bank branches and per capita LIHTC allocations is made in **models 2 and 3**, the F-statistics and correlations between the dependent variable and the number of commercial bank branches remains significant at the $p < .005$ level, with reduced but reasonably healthy adjusted r^2 levels. **Table 2** below summarizes the key statistical aspects of all three models.

Table 2. Summaries of the three regression models.

n = 100	**Model 1**	**Model 2**	**Model 3**
Dependent variable	Federal LIHTC allocations per capita per county	Federal and state LIHTC allocations per capita per county	Federal and state LIHTC allocations for projects not receiving Section 515 funding per capita per county
Coefficients: Independent variables (*t*-values in parentheses)			
Constant	5.956 (4.173)***	7.940 (5.120)***	8.195 (7.077)***
Commercial bank branches per county	.163 (6.153)***	.161 (5.393)***	.159 (5.547)***
Federal LIHTC allocations for projects receiving Section 515 funding per capita per county	.760 (3.310)***	1.062 (4.244)***	N/A
State LIHTC allocations per capita per county	1.033 (2.652)**	N/A	N/A
Correlations: Independent variables			
Commercial bank branches per county	.430***	.382***	.489***
Federal LIHTC allocations for projects receiving Section 515 funding per capita per county	.215**	.253**	N/A
State LIHTC allocations per capita per county	.261***	N/A	N/A
Summary statistics			
R^2	.348	.280	.239
Adjusted R^2	.328	.265	.231
SEE	8.509	9.591	9.545
F	17.072***	18.850***	30.771***

* indicates significance at $p < .05$; **indicates significance at $p < .01$; ***indicates significance at $p < .005$

Limitations of the regression models

While the results suggested by the models above are encouraging, a number of caveats should be pointed out regarding their limitations. First, the small number of independent variables – especially in **models 2 and 3** – result in relatively low adjusted r^2 levels. As a result, this analysis may be missing a key variable that is more important than the number of commercial bank branches per county.

Also, it should be noted that the use of grant funding and soft loans, most notably through the Rental Production Program administered through NCHFA but also including the Federally-sponsored HOME and CDBG programs, are not accounted for due to the unavailability of data. These programs may make LIHTC developments easier to fund in typically disadvantaged areas; furthermore, if these funds are used as programmatic support for development in these areas, the LIHTC allocation numbers would be lower as a result of Federal regulations that subtract such grants from the eligible basis of a project.[44] Similarly, access to soft money that is not deducted from the eligible basis of a project may both be connected to areas that are higher in population or have higher income levels, both of which are highly correlated with the number of commercial bank branches. If that is true, then LIHTC properties in those areas would be more financially feasible, which in turn may skew allocation levels to be higher in counties with more commercial bank branches.

Finally, while the state LIHTC has been used by NCHFA to support development in lower-income counties, it has typically been an ineffective tool for generating equity as it

[44] McClure, ibid.

is useful only for investors having tax liability in North Carolina. This year, the state credit has been changed to a format that essentially allows NCHFA to directly provide equity for LIHTC developments. It remains to be seen whether or not this policy change affects the distribution of LIHTC allocations.

Alternative interpretations of correlations between allocations and the presence of commercial bank branches

While this analysis has assumed that the number of commercial bank branches in a county can be used as a proxy for access to investors and developers that specialize in building LIHTC properties, it is possible that this variable represents a proxy for an entirely different factor in the allocation of the LIHTC.

First, it is possible that the presence of commercial banks is related to the demand for housing in general and, by extension, the demand for affordable housing produced through the use of the LIHTC. At first glance, the correlation between the number of commercial bank branches and the percentage of housing units built in 1995 and after – a proxy for housing demand – came up as significant, showing a correlation of r = .228, which is significant at the $p < .05$ level. However, it is important to note that the percentage of housing units built in 1995 and after is also significantly correlated with population (r = .232); population, in turn, is extremely highly correlated with the number of commercial bank branches in a county (r = .984). When population is controlled for by transforming the number of commercial bank branches into a per capita statistic, the correlation with the percentage of housing units built in 1995 and after not only becomes insignificant but also negative at r = -.175. This finding casts doubt on the assertion that the presence of commercial bank branches is indicative of high housing demand. A complete list of these correlations is given below in **Table 3**.

Table 3. Correlations between variables associated with housing demand

n = 100	**Commercial bank branches per county**	**Commercial bank branches per capita per county**	**Percentage of housing units built 1995 and after per county**	**Population**
Commercial bank branches per county	N/A	.064	.228*	.984***
Commercial bank branches per capita per county	.064	N/A	-.175	-.045
Percentage of housing units built 1995 and after per county	.228*	-.175	N/A	.232*
Population	.984***	-.045	.232*	N/A

* indicates significance at $p < .05$; **indicates significance at $p < .01$; ***indicates significance at $p < .005$

Next, we can examine whether or not income is a factor in our findings. Because higher rents can be charged for LIHTC units in higher-income counties, the theory can be advanced that LIHTC developments may be easier to develop in such locations.[45] While the number of commercial bank branches in a county is strongly correlated with area

[45] Shelburne, ibid.

median income, it is quite possible that this is an artifact of the correlation between income and population; income actually shows a negative correlation with the number of bank branches per capita per county. Furthermore, income is not strongly correlated with per capita allocation amounts, which casts doubt on the theory that differences in income may be responsible for the results in the models presented in this paper. A complete list of these correlations are given below in **Table 4**.

Table 4. Correlations between variables associated with income

n = 100	**Area Median Income**	**Federal LIHTC allocations per county per capita**	**Federal and state LIHTC allocations per county per capita**	**Commercial bank branches per county**	**Commercial bank branches per capita per county**
Area Median Income	N/A	.074	.021	.477***	-.165
Federal LIHTC allocations per county per capita	.074	N/A	.981***	.430***	.255*
Federal and state LIHTC allocations per county per capita	.021	.981***	N/A	.382***	.242*
Commercial bank branches per county	.477***	.430***	.382***	N/A	.064
Commercial bank branches per capita per county	-.165	.255*	.242*	.064	N/A

* indicates significance at $p < .05$; **indicates significance at $p < .01$; ***indicates significance at $p < .005$

Why does the presence of commercial bank branches influence LIHTC allocations? An examination of counties that buck the trend

With the link between commercial bank branches and LIHTC allocations established, a useful exercise may be to examine the counties that do not follow the expected pattern suggested by the regression models in this analysis. Specifically, the 18 counties that have per capita Federal LIHTC allocation levels that are above the statewide median but per capita commercial bank branch numbers that are below the statewide median are of interest, and are discussed below. These 18 counties can be placed into four groups:

First, a group of counties in the eastern part of the state that include Columbus, Craven, Duplin, Edgecombe, Greene, Northampton, Pitt and Robeson, have been eligible for additional allocations as a result of efforts to assist areas damaged by Hurricane Floyd, and may show higher per capita allocation numbers as a result.

Second, a group of these counties are either within an identified MSA or directly contiguous to a highly populous county; these include Buncombe, Cabarrus, Gaston, Iredell and Stokes, with Edgecombe and Pitt included from the list of counties above that are eligible for hurricane relief funds. As a result to proximity to metropolitan areas, these counties may have greater access to the LIHTC development infrastructure than others.[46]

[46] In addition to the findings listed above, it is important to note that the three counties in which no LIHTC developments are located – Camden and Gates in the extreme northeast portion of the state, and Clay in the extreme west – are quite far removed from any metropolitan area.

Third, Vance and Warren counties show a greater percentage of housing units built in 1995 or after than the state average. Furthermore, they are classified as Tier 1 counties by the North Carolina Department of Commerce, which indicates that they are among the most economically distressed counties in the state. The fact that Tier 1 counties show an even smaller percentage of housing units built 1995 and after than the state as a whole implies that they are unusually fast-growing counties. Additionally, both are reasonably close to and connected by Interstate 85 to the Raleigh-Durham-Chapel Hill MSA, which may imply greater access to the LIHTC development infrastructure, as Wake and Durham counties rank first and fourth in total Federal LIHTC allocations, respectively.

Fourth, Macon, Scotland and Yancey counties have no apparent link and cannot be categorized with any of the three groups above.

Some thoughts from the LIHTC pros on location

In order to address the above findings and better inform this analysis, a series of interviews with professionals in the North Carolina LIHTC industry was conducted. Interviewees included Mark Shelburne, Policy and Legal Affairs Officer at NCHFA; Charles R. "Chuck" Newcomer, the Vice President and Director of the Underwriting Group at the Community Affordable Housing Equity Corporation in Raleigh; and Murray F. Gould, President and Founder of Gould and Associates, a Raleigh-based development firm specializing in tax credit properties. Notable findings from these interviews are listed below.

First and foremost, LIHTC property location is driven by the whims of the market. All three interviewees indicated that the strength of the affordable housing market drives project feasibility and, therefore, location. Gould noted:

> *We really focus on the market – what's the competition like, how is the supply of housing, what are the demographics like. We can find a project that might look good in one of the coastal counties, but if there are only 10,000 people living in the county, we won't be able to find anybody who wants to rent there. We have to make sure we have enough customers before we do anything.*[47]

Shelburne also noted that market dynamics play an important role in the location of LIHTC properties; however, as the value of credits has increased in recent years, the range of locations in which financially feasible properties can be built has broadened.

> *Location is really determined by the developers. We have been able to steer location a little more in recent years; back when the price of credits was lower, it was very difficult to build a feasible property outside of high-income locations because the amount of bank debt was too high and that drove rents to be too high as well.*[48]

Developers, especially those working on a smaller scale, may have an incentive to pursue opportunities close to home. Newcomer indicated that the combination of travel and specialized knowledge needed to develop a LIHTC property may narrow the geographic scope of operations for developers:

> *Some of the smaller developers – especially nonprofit developers – will only develop in one state or a part of a state. It has to be local unless you have a big organization, because developers have to physically spend time at a location to complete a project. Development also requires a relationship with the state finance agency and knowledge of the regulations in the QAP.*[49]

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[47] Gould, Murray F. (2003). Personal Interview. April 16, 2003.
[48] Shelburne, ibid.
[49] Newcomer, ibid.

While investors do make demands with respect to the location of LIHTC properties, they are generally broad in nature. While Newcomer noted that the largest investors in the LIHTC market, Fannie Mae and Freddie Mac, generally do not make strong demands with respect to the location of properties, commercial banks looking to meet CRA requirements often look to invest in specific locations:

> *Banks can be specific in terms of location. Most of our larger investors are located statewide in North Carolina, but some have acquired smaller banks and have more regional interests. If a smaller bank that has been acquired hasn't done too well with the CRA, the investor may say, "We want something in* county X*." We're starting to see that more and more.*[50]

Having an interested local government matters, as soft money improves both project feasibility and project scoring under the North Carolina QAP. In addition to earlier comments regarding project feasibility in higher-income counties, Shelburne noted that the abnormally high rate of allocations seen in Wake County may also be a result of generous local government support through housing bonds and grants.

> *A big difference in Wake County has been local government lending. If you can get financing at one or two percent from a government source, projects become more feasible; we also give bonus points for local government funding. Wake County and Raleigh have done a good job of supporting low-income housing in the past.*[51]

Finally, the point structure of the QAP does determine the pattern of development, if only to a small extent. Before a developer can get a property through the syndication process and equity for construction can be obtained, an allocation of credits must be obtained; because of this fact, developers do sometimes chase points. As Newcomer noted:

[50] Newcomer, ibid.
[51] Shelburne, ibid.

Developers will chase points – if they didn't, they would probably never venture out of the urban areas and into tobacco country.[52]

Conclusion: developers, investors, and local governments all affect the location of properties, but to what extent?

As a result of the findings of the models used in this paper as well as information gleaned from key informants, further analyses to address three issues may be warranted. First, access to the LIHTC development community appears to be important. LIHTC developers may be geographically concentrated; because of the need to spend time at LIHTC property sites as well as the benefits gained through having specialized knowledge and relationships with those making allocation decisions, developers may be reluctant to pursue opportunities in distant locations. The question of how much proximity matters in location decisions has potential policy implications, as regulations set forth by state finance agencies may be able to ameliorate distributional failures. This should be addressed in future research; given the availability of data, spatial correlations between developers and properties could easily be gauged.

Second, the role of soft money from local government and nonprofit sources should not be overlooked as a possible factor in location decisions. Considering that the LIHTC represents the latest step in the Federal devolution of affordable housing policy, a link between local government interest and the production of LIHTC units would not be surprising. Detailed data may not be available on the amount of soft money used in the

[52] Newcomer, ibid.

development of these properties; however, the policy implications of disparities in local funding should not be overlooked in future research efforts.

Finally, while developers most probably have little difficulty finding debt capital for LIHTC properties, equity investment – specifically, from banks that are largely motivated by Community Reinvestment Act of 1977 regulations requiring equity investment in their service areas – may be directed towards those areas best served by commercial banks, which in turn may limit the sites selected for investment. While there was dissent among key informants around the extent to which investors influence site selection, the syndicator in the group noted that his firm spent a significant amount of time chasing after developers that could deliver projects in areas desired by his firm's investors. This implies that the actions of investors may be important, and that they represent another area of future research.

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