

Analysis of the Low-Income Housing Tax Credit Program

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POLICY PAPER

1 | Executive Summary

One of the largest suppliers of affordable housing in the United States has been the Low-Income Housing Tax Credit (LIHTC) program. This program subsidizes the development of affordable housing projects through tax credits, redeemable over 10 years. In this paper, we investigate concerns over the growing costs and diminishing returns of the program in two states, Washington and Arizona.

To do this, we used a multivariate least squares model and found statistically significant increases in LIHTC financed projects' construction costs on a per square foot and per unit basis. Finally, we examined the qualitative deficiencies of LIHTC housing over alternative affordable housing programs.

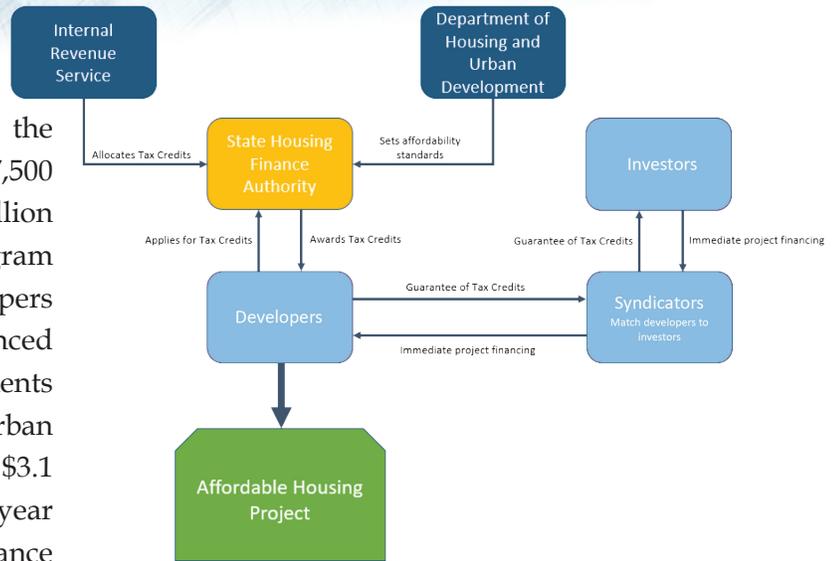
We found that in both states there is a significant increase in the cost of construction when a project is financed utilizing LIHTC compared to similar market rate housing. Lack of oversight, transparency, requirements to pay Davis-Bacon prevailing wages and inadequate cost control measures all attribute to the higher development costs. Even if these issues are addressed through reforms, we conclude that other tenant-based programs, such as the Housing Choice Voucher program, are better suited to provide housing for low income residents than the LIHTC program.

3.1: Simplified Financing and Development Network

2 | Introduction: The LIHTC

The Low-Income Housing Tax Credit, part of the Tax Reform Act of 1986, has subsidized over 47,500 affordable housing projects, creating 3.12 million housing units since its inception¹. The program operates by offering federal tax credits to developers who construct new, rehabilitated, or refinanced rental housing that meets affordability requirements set by the U.S. Department of Housing and Urban Development. Each state is granted the larger of \$3.1 million or \$2.70 per capita in tax credits each year to be allotted by the relevant state housing finance authority (HFA).

There are two types of tax credits offered, the 4% and 9% tax credits. The tax credit is calculated to be 4% or 9% of the initial project development costs and is then redeemable every year for 10 years, equivalent to a present value of around 30% and 70% of the project’s costs, respectively. Quite often, developers trade the promise of these tax credits to investors for immediate equity to finance construction.² In addition, specialized LIHTC syndicators exist to match developers to investors looking to fund profitable projects with philanthropic qualities, in this case low-income housing. The financing and development process in simplified in figure 3.1.



The 4% program is for projects already receiving a majority of their funding through tax-exempt bonds and is granted on a non-competitive basis through the federal government, meaning all qualified 4% applicants will receive funding and it does not come out of state HFA funds.

The 9% program is awarded on a competitive basis through state HFA funds. As there is a limited amount of funding, HFA’s allocate funding through a formal and transparent scoring process called a State’s Qualified Allocation Plan (QAP). QAPs evaluate if development meets the federal affordability requirements, state affordability requirements, and other qualities the HFA finds desirable. Some notable qualities used in both of our selected states’ (Arizona³ and Washington⁴) respective QAPs include the expected efficiency and timeliness of the project, the design standards, if it serves at-risk or marginalized demographics, the environmental impacts, and proximity to public transit.

1 LIHTC Database, (U.S. Department of Housing and Urban Development, 2019)
 2 Corianne Payton Scally, Amanda Gold, and Nicole DuBois, The Low-Income Housing Tax Credit How It Works and Who It Serves, (Urban Institute, 2018)

3 2020 Qualified Allocation Plan - 1st Draft, (Arizona Department of Housing, 2018)
 4 2020 9% Competitive Tax Credit Application - Qualified Allocation Plan, (Washington State Housing Finance Commission, 2019)

The affordability requirements are evaluated in three ways: the assistance provided to each unit, the income of the tenants, and the number of affordable units in a project. The first requirement is evaluated quite simply: for a unit to be considered affordable, the amount a tenant spends on housing costs (rent plus utilities) cannot amount to more than 30% of their income. The second and third requirements are evaluated in tandem. Using area median incomes (AMI) as calculated by the HUD, each project must have 20% of units be affordable for households at 50% of the AMI or 40% of units be affordable for households at 60% of the AMI.⁵ Developments must maintain these affordability requirements for their first 30 years of operation and often stay affordable for longer, either offering a longer period for compliance to State HFAs to “win” the competitive 9% allocation or because they’re participating in other affordability programs with longer compliance periods.⁶

This paper will be an analysis of the competitive 9% program, particularly within the states of Arizona and Washington.

3 | National Overview

A 2018 U.S. Government Accountability Office report found that the LIHTC program “represented an estimated \$8.4 billion in foregone revenue in 2017”, making it the largest and most expensive source of affordable housing funding in the country.⁷ The report found the program has supported upwards of 50,000 affordable housing units since 2010.

Despite the large amount of tax credit activity, the GAO discovered that minimal resources were dedicated by the federal government to track the program or collect data on development costs, making it impossible for Congress to assess to the program’s efficiency or effectiveness. They also determined that the lack of monitoring made the program a high risk for fraud, a concern that proved prophetic when it was disclosed in 2019 that the Department of Justice is reaching settlements with several banks for colluding with developers to manipulate the bidding process for LIHTC. Such a huge subsidy program requires oversight, making sure the benefits of the subsidy are being received by those the program was established for, low income tenants.

⁵ In 2018, these requirements were modified to allow for the situation where households earning up to 80% of AMI could be counted as affordable if the average income of all affordable units is below 60% AMI. This was done to incentivize leasing to a broader range of incomes and give tenants whose income has or will rise during their lease a smoother transition off of assistance.

⁶ Jill Khadduri, Carissa Climaco, and Kimberly Burnett, *What Happens to Low-Income Housing Tax Credit Properties at Year 15 and Beyond?*, (Abt Associates, 2012)

⁷ Daniel Garcia-Diaz, *Low-Income Housing Tax Credit: Improved Data and Oversight Would Strengthen Cost Assessment and Fraud Risk Management*, (United States Government Accountability Office, 2018)

Figure 3.2 shows the general increase of LIHTC funding given to projects since the program’s 1987 beginning.

3.2: Total Value of LIHTCs Granted Per Year

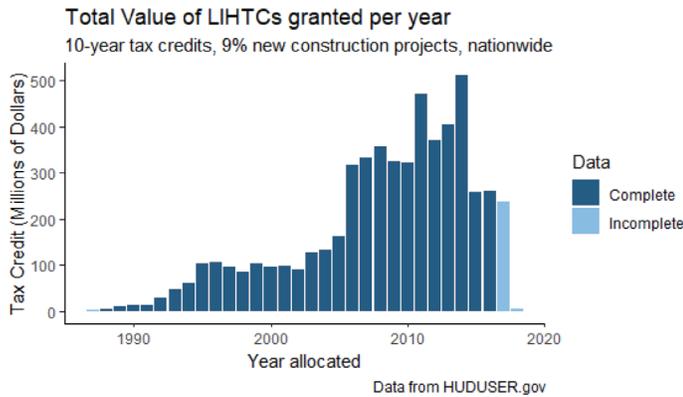
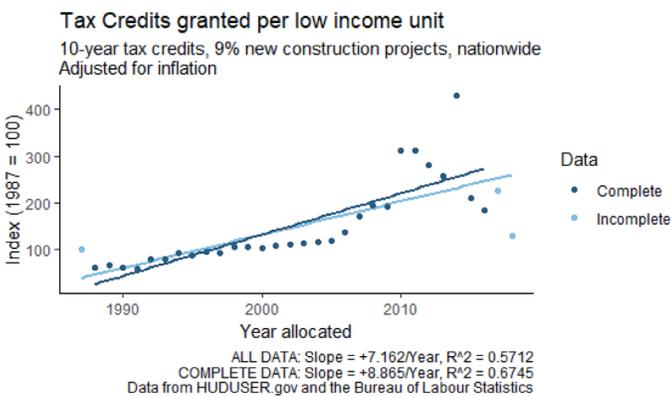


Figure 3.3 shows how the number of tax credits granted per low income unit has increased by an average of 10% per year, after adjusting for inflation.

3.3: Tax Credits Granted Per Low Income Unit



As the amount of tax credits granted to a project is calculated as a positive percentage of the total development costs, we can assume a direct correlation between an increase in tax credit allocation and an increase in total development costs.

As with any government program, it is desirable to provide the most assistance to the neediest at the lowest cost possible. The above tables breed concern as to whether the LIHTC program is truly a cost-effective way of providing affordable housing.

The above figures do not tell the whole story. To take a more critical approach, we analyzed the difference in development costs, specifically the construction costs, of LIHTC developments and equivalent market rate developments. To do this, we built two regressive models to account for the size and quality of housing developments, then estimated the construction cost differences across two states: Arizona and Washington.

4 | Regression Model

The first model we created uses the construction costs per square foot as the dependent variable and uses the number of units, the number of stories, and a binary variable regarding if a project was LIHTC financed as the independent variables.

$$y^i = B_1 * x_1^i + B_2 * x_2^i + B_3 * x_3^i + e^i$$

$$y^i = \frac{\text{Project construction costs}(\$)}{\text{Total floor area}}$$

$$x_1^i = \begin{cases} 0 & \text{if project } i \text{ was not LIHTC Funded} \\ 1 & \text{if project } i \text{ was LIHTC Funded} \end{cases}$$

$$x_2^i = \text{Number of units in project } i$$

$$x_3^i = \text{Number of stories in project } i$$

The second model we created uses the construction costs per unit as the dependent variable and uses the average size of each unit, the number of stories, and a binary variable regarding if a project was LIHTC financed as the independent variables.

$$y^i = B_1 * x_1^i + B_2 * x_2^i + B_3 * x_3^i + e^i$$

$$y^i = \frac{\text{Project construction costs}(\$)}{\text{Number of units}}$$

$$x_1^i = \begin{cases} 0 & \text{if project } i \text{ wasn't LIHTC Funded} \\ 1 & \text{if project } i \text{ was LIHTC Funded} \end{cases}$$

$$x_2^i = \frac{\text{Total Floor area}}{\text{Number of units}}$$

$$x_3^i = \text{Number of stories in project } i$$

For both models, we tested the relevancy of the LIHTC parameter, for both models 1 and 2 using a restricted model test. In other words, we tested a hypothesis that

$$B_1 = 0$$

Against the alternative that $B_1 \neq 0$

The results of these tests on data from Arizona and Washington are discussed in Section 5.

5 | Estimation

Using building permit datasets from Arizona⁸ and Washington⁹ public data repository, we took a representative sample of new residential construction use as the non-LIHTC financed observations in our comparison. To ensure representativity, we stratified the sample based on the permit class denoted on the permit, taking a proportion of each permit class equal to the proportions the original population holds. We estimated each model over both states, once using the number of stories variable and once without. The full regression summaries can be found in appendix subsections 1.1-1.2 and 2.1-2.2.

State	Model	LIHTC effect (dollars): \hat{B}_1	Significant?	Degrees of Freedom
Arizona	Model 1 – Cost/SQF	39.87	Yes	109
Arizona	Model 2 – Cost/Unit	34015.52	Yes	109
Washington	Model 1 – Cost/SQF	77.82	Yes	92
Washington	Model 2 – Cost/Unit	1634.16	No	92

These results show us how, across both Washington and Arizona, we see statistically significant increases in construction costs when a housing project is financed through the LIHTC program in three out of four of our measures. While LIHTC financing in Washington does correlate positively with an increase in construction costs per unit, the relationship is highly insignificant and is better explained by other factors.

⁸ Arizona Department of Housing, 2018

⁹ Washington State Housing Finance Commission, 2019

6 | Interpretation

This analysis demonstrates LIHTC housing cost more to develop than equivalent market rate housing. We've identified several reasons this may be the case. As the 9% Tax Credits are awarded on a competitive basis, the methods state-qualified allocation plans use to score projects often include a number of criteria that aren't immediately relevant to general "affordable housing development". While a number of these criteria come from altruistic motivations, their relevance to the goals of the LIHTC and impact on development costs must be considered.

The first criterion we would examine is the scoring of a project on if they serve tenant populations with special needs, such as the elderly, chronically homeless, those in need of assisted living, and more. Abt Associates' 2018 report to the National Council of State Housing Agencies found that the population a project is built for can have an effect upwards of ten thousand dollars on the total development cost.¹⁰

Another criterion we look at would be the incentives placed for programs to pay Davis-Bacon wages. For example, the 2020 Arizona QAP mandates a 5% increase in the tax credits granted if Davis-Bacon wages are paid. While some may view it as desirable to raise the compensation of workers on LIHTC projects, there is no question that this ultimately increases the cost of the project and the amount of tax credits needed to finance a project. The same NCSHA study mentioned above found "an increase of \$1,000 in average annual construction wages was highly, statistically, and significantly associated with an increase in per-unit TDC of approximately \$4,700".¹¹

One problem that was explicitly highlighted in the Government Accountability Office's September 2018 report on the oversight of the LIHTC program is the lack of standardization, and sometimes complete absence, of cost management measures set by state HFAs.¹² The report found only 2 out of 57 LIHTC allocating agencies had limits on the development cost per unit and only 6 out of 57 LIHTC allocating agencies limited the amount of tax credits that could be issued per unit in a project.¹³ Additionally, there were only 3 allocating agencies that penalized developers re-applying for credits if they had a history of not fulfilling program requirements or cost standards.¹⁴ Without mechanisms to keep these costs in check, we should expect to see a less efficient and more expensive LIHTC program in the future.

7 | Other Subsidy Programs

Any concern over excess costs of LIHTC-financed projects must be weighed against the benefits of the affordable housing being provided. In other words, the goal should be to analyze the program's overall effectiveness. One thing we can do to gauge the program's effectiveness is to compare the LIHTC program to other housing subsidy programs.

One program we see as having significant benefits to the LIHTC program is the Section 8 Housing Choice Voucher (HCV) program. This program provides vouchers to households of similar demographics that the LIHTC program services that can be used to

¹² Daniel Garcia-Diaz, p. 174

¹³ The 57 allocating agencies include 50 state HFAs, the HFAs of New York City and Chicago, as well as 5 agencies from U.S. Territories.

¹⁴ Daniel Garcia-Diaz, p. 176

¹⁰ Jeffrey Lubell and Sarah Wolff, "Variation in Development Costs for LIHTC Projects," National Council of State Housing Agencies – NCSHA, p. 27

¹¹ Lubell and Wolff, p. 21

help pay rent in a housing unit of their choice. HCVs provide very similar levels of subsidy¹⁵ with additional benefits to the recipient.

Broadly speaking, HCVs are considered “tenant-based” assistance whereas LIHTC’s are “location-based” assistance. While there are benefits and disadvantages of each, the most convincing argument in favor of tenant-based assistance is the freedom and economic mobility it grants to tenants.¹⁶ This freedom and economic mobility are characterized in two specific ways.

First, this retains the free-market mechanism of requiring landlords to compete for tenants. If a landlord attempts to charge a tenant over the going market rates, a voucher recipient can move to a new location. Conversely, tenants in affordable housing projects would lose their subsidy if they moved; they’re a “captive audience”.¹⁷ This principle of competition applies to other characteristics of a housing unit, such as the general building quality of a unit and neighborhood desirability. Neighborhood desirability, in particular, can be very subjective and is best left to the individual tenant preferences.

Second, the transferability of vouchers from unit to unit grants does not discourage tenants from moving to new employment opportunities. If a tenant receives location-based assistance and gets a job offer in a different neighborhood, they would be forced to choose between their assistance and the new job.

Tenant based assistance doesn’t discourage that, it allows people to move to new jobs, increasing their income and contribution to the economy.¹⁸

8 | Conclusion

Our investigation has shown there are legitimate concerns regarding the costs and quality of affordable housing provided through the Low-Income Housing Tax Credit program. Given the recent increases in the program’s per unit cost, as well as the exceptional premium LIHTC developers require in construction costs, we urge the IRS to consider requiring cost transparency and cost control measures from state HFAs, akin to recommendation 2 from the 2018 GAO report.¹⁹ In addition, we suggest the Department of Housing and Urban Development explore the possibilities of shifting to tenant-based assistance programs, for the reasons outlined in section 7. Finally, when developing future Qualified Allocation Plans, we implore state HFAs to reorient themselves to the original purpose of the program: to provide affordable housing to the highest number of the neediest tenants.

¹⁸ This, of course, assumes the new job does not increase their income beyond what would disqualify them for rental assistance. Both programs have a very aggressive income cut-off, AKA a welfare cliff, and would benefit from redesigning their fixed income qualifications to a smoother phasing in and out of assistance. This eliminates the situation in which taking a new job with a salary above assistance cut-offs would result in a net loss of total income.

¹⁹ Daniel Garcia-Diaz, p. 67

¹⁵ Both mandate tenants can pay no more than 30% of income toward housing and select tenants based on similar income (as a percent of AMI) requirements as well as if they are tenants with higher needs (families, chronically homeless, etc.)

¹⁶ Edgar O. Olsen, *Getting More from Low-Income Housing Assistance*, (The Hamilton Project, 2008)

¹⁷ Olsen, p. 15

Appendix

Section 1: Arizona Tables and Figures

1.1.1: Arizona: Model 1 Regression Results

```
Call:
lm(formula = PriceSQF ~ LIHTC + Units + Stories, data = df_stories)

Residuals:
    Min       1Q   Median       3Q      Max
-65.032  -4.174  -0.562   2.521  56.041

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)  81.01080    3.16729   25.577 < 2e-16 ***
LIHTC        39.87129    4.33513    9.197 2.9e-15 ***
Units         0.02622    0.03044    0.861  0.3909
Stories      3.97383    2.05326    1.935  0.0555 .
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 14.72 on 109 degrees of freedom
Multiple R-squared:  0.5297,    Adjusted R-squared:  0.5167
F-statistic: 40.92 on 3 and 109 DF,  p-value: < 2.2e-16
```

1.1.2: Arizona: Model 1 Restricted Model Test

Analysis of Variance Table

```
Model 1: PriceSQF ~ Units + Stories
Model 2: PriceSQF ~ LIHTC + Units + Stories
  Res.Df  RSS Df Sum of Sq    F    Pr(>F)
1     110 41945
2     109 23617  1     18328 84.589 2.896e-15 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

1.2.1: Arizona: Model 2 Regression Results

```

Call:
lm(formula = PriceUnit ~ LIHTC + FAPU + Stories, data = df_stories)

Residuals:
    Min       1Q   Median       3Q      Max
-171289  -5281   1155   9962  81330

Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept) 12807.823   9536.337    1.343 0.182044
LIHTC       34015.520   8701.818    3.909 0.000161 ***
FAPU         77.871     2.579   30.198 < 2e-16 ***
Stories     4883.996   2757.444    1.771 0.079322 .
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 27590 on 109 degrees of freedom
Multiple R-squared:  0.9064,    Adjusted R-squared:  0.9038
F-statistic: 351.8 on 3 and 109 DF,  p-value: < 2.2e-16
    
```

1.2.2: Arizona: Model 2 Restricted Model Test

Analysis of Variance Table

```

Model 1: PriceUnit ~ FAPU + Stories
Model 2: PriceUnit ~ LIHTC + FAPU + Stories
  Res.Df    RSS Df Sum of Sq    F    Pr(>F)
1     110 9.4593e+10
2     109 8.2962e+10  1 1.163e+10 15.28 0.0001613 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
    
```

Section 2: Washington Tables and Figures

2.1.1: Washington: Model 1 Regression Results

```

Call:
lm(formula = PPSQF ~ LIHTC + Units + Stories, data = df)

Residuals:
    Min       1Q   Median       3Q      Max
-108.55  -46.32   -2.36   21.44  331.43

Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept) 116.2020   27.8410   4.174 6.79e-05 ***
LIHTC         77.8169   33.6403   2.313  0.0229 *
Units          0.2009    0.5935   0.338  0.7358
Stories       -1.7104    9.3972  -0.182  0.8560
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 67.09 on 92 degrees of freedom
(1 observation deleted due to missingness)
Multiple R-squared:  0.1817,    Adjusted R-squared:  0.155
F-statistic: 6.807 on 3 and 92 DF,  p-value: 0.0003401
    
```

2.1.2: Washington: Model 1 Restricted Model Test

```

Analysis of Variance Table

Model 1: PPSQF ~ Units + Stories
Model 2: PPSQF ~ LIHTC + Units + Stories
  Res.Df  RSS Df Sum of Sq    F Pr(>F)
1     93 438176
2     92 414091  1    24084 5.3509 0.02294 *
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
    
```

2.2.1: Washington: Model 2 Regression Results

```

Call:
lm(formula = PPU ~ LIHTC + FAPU + Stories, data = df)

Residuals:
    Min       1Q   Median       3Q      Max
-264593  -74690  -21255   47174 1035655

Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept) 224772.30   57550.20   3.906 0.000179 ***
LIHTC         1634.16   51280.84   0.032 0.974647
FAPU           56.04    12.65    4.430 2.59e-05 ***
Stories     -29411.54  12446.04  -2.363 0.020227 *
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 159200 on 92 degrees of freedom
(1 observation deleted due to missingness)
Multiple R-squared:  0.2589,    Adjusted R-squared:  0.2348
F-statistic: 10.72 on 3 and 92 DF,  p-value: 4.168e-06
    
```

2.2.2: Washington: Model 2 Restricted Model Test

Analysis of Variance Table

```

Model 1: PPU ~ FAPU + Stories
Model 2: PPU ~ LIHTC + FAPU + Stories
  Res.Df    RSS Df Sum of Sq    F Pr(>F)
1     93 2.331e+12
2     92 2.331e+12  1  25729302 0.001 0.9746
    
```

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