Privatizing of NYCHA Public Housing

How could privatization improve quality of public housing?

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Abstract

This research addresses the recent policy shift in the provision of affordable housing in New York, namely the privatization of this “public good” during the early government-funded NYCHA public housing to the more recent public-private partnerships and fully privately funded and owned affordable housing units. The author addresses the following questions: How could privatization benefit NYCHA housing given the ever increasing demand for more units and better quality? What strategies could help NYCHA provide functioning housing units more efficiently?

The history of affordable housing policy is studied along with comparison of typical publicly funded and managed NYCHA housing and public-private partnered affordable housing. NYCHA public housing is mostly funded by federal or city subsidy. The study examines the possible privatization of NYCHA development and looks into privatized affordable development to find strategies for improvement of space, quality and service. Recommendations are made based on results of quantitative analysis, site observation, and theory of public goods and privatization. These recommendations are also based on interview findings, interviews with residents, developers and housing officials.
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Introduction and Background

Introduction

Public housing is defined as housing owned by a public authority and affordable to those with low incomes. In the city of New York, public housing dates back to the 1930s. NYCHA (New York City Housing Authority) was founded in 1934 as a quasi-private corporation, with board members appointed by elected officials such as mayors. The main benefit of being a quasi-private corporation is that NYCHA acts as government agency but it is less limited by government regulation.\(^1\) Their early projects coincided with Robert Moses’ slum clearance efforts after World War II.\(^2\)

NYCHA projects mainly depend on the city and state funding and partially on federal funding. The housing units are managed and owned by NYCHA and priority is given to people of lower income. NYCHA is also shifting to favor middle-income working class applicants. During the 1980s, NYCHA started accepting Federal Section 8 vouchers, which provide rental housing assistance to private landlords to cover the difference between an amount of 30% percent of the residents’ incomes and the rent. In doing this, NYCHA started to assist private developers to provide affordable housing, an effort to share the public benefit provision task with the private sector. Section 8 housing vouchers were no longer available in 2009, however, due to budget cuts after the financial crisis and increased demand.\(^3\)

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2 Robert Moses, 1888-1981. City planner, worked mainly in the New York and known as the “master builder”.
Due to the government facing deficits with dwindling federal funds, the construction of new NYCHA public housing was stopped in 1974. At that time, there was a total of 179,062 NYCHA units. Then new affordable developments start to focus on using policy to leverage private capital. Incentivized by various tax breaks, developers were buildings housing units that target residents with 50% or 60% of Area Median Income (AMI). Similarly, extra benefits like higher permitted Floor Area Ratio (FAR) or tax exemption was offered under the 80/20 rules initiated by Mayor Bloomberg, when at least 20 percent of the new housing units had to be affordable.4

As we celebrate the 81st anniversary of NYCHA, the term public housing has become synonymous with perceptions of crime, a negative living environment, failed maintenance and poor management. According to a NYCHA resident interview, “The mold and broken pipes are never truly fixed. We put in ticket after ticket, but they [maintenance workers hired by NYCHA] only show up for superficial work, to clean up the walls and bleach them” (Personal interview with NYCHA residents, 2016, March). It could take years of complaining, protesting and even lawsuits to completely solve a normal mold or leaking problem.

Since the 1990s, American housing policies favored the demolition of large public housing and construction of privatized, mixed income units. These supposedly better units provided a higher living standard for middle income families, but protests about displacement of the poor started to fill the headlines of newspapers. Though housing quality improved for the new residents, the original residents were displaced. As a result, the newly designed affordable housing became affordable only to the middle income households, not to the original lower

4 New York Department of State, 80/20 Housing Program. Retrieved from http://www.nyshcr.org/Topics/Developers/MultifamilyDevelopment/8020HousingProgram.htm
income families. This raised the question: Are current policies really helping with affordable New York housing for the poor?

If NYCHA can’t solve the affordability problem, how could it manage efficiently with a limited budget and create new capital sources to offset the dwindling federal grants and increasing cost of maintenance? The author proposes that, since NYCHA owns undeveloped public lands, the empty lots could be leased or sold to private developers to cross-subsidize the existing stock. Similarly, for underdeveloped NYCHA lands, private capital could be leveraged to redevelop and densify the lands. Therefore, could privatizing NYCHA lands be the answer?

**Background**

Incredibly high housing prices have increasingly been a concern in New York City. The whopping cost of housing devours a large share of New Yorkers’ income, so residents with less income have a hard time finding affordable units in desirable locations, lowering the quality of life in New York City and making it less attractive and diverse.

Why is public housing important and why does the government keep providing public housing? According to Maslow’s hierarchy of needs, housing is one of the basic needs for human beings, providing three things: physiological space, assurance of safety, and a sense of belonging. Furthermore, it was thought, the city should be a place created for all residents. No one should be denied access to the diversity of culture, convenience of transportation, access to art, health and education that defines a city. For a city to function properly, it needs people with different level of skills and labor. For example, to have successful brokers and bankers, we also need cleaning staff and laborers that facilitate the functioning of the city. They are from a

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different socio-economic status, but are equally essential to a healthy economic structure. The integration of all residents propels the production of goods and services. High rent would inevitably drive up the cost of labor and services, thereby denying people urban access to a better education, jobs, and parks. Thus, public housing is essential in supporting the lives of metropolitan residents far beyond the poor as well as in sustaining a balanced growth.

In 2014, New York City Mayor De Blasio initiated a ten-year plan for 200,000 affordable housing units. The proposal brought affordable housing back to the center of attention. This is not new to the city, as a series of affordable housing programs had been periodically implemented.

With the first federal housing legislation, the National Housing Act of 1934, HUD (Department of Housing and Urban Development) and FHA (Federal Housing Administration) were created. In that same year, the New York City Housing Authority (NYCHA) was also established. This first stage of New York’s affordable housing provision focused on governmental funding to build and sustain affordable housing units. Policies changed and evolved over time. For example, the FHA used to build housing projects through competitive bidding, under strong supervision and bureaucratic control. By the 1960s, government started the Turnkey Programs, whereby the government contracted out the land acquisition process. In this process, private developers could develop housing projects on their own land and turn over the keys to FHA when the project was complete. This was identified by Charles L. Edson as the start of privatization. In theory it reduced the time consuming process of application, supervision,

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and government control, and saved the government time and resources. This was the first step the government took. Within 20 years, the FHA adopted a more entrepreneurial approach, using tax credits as incentives to leverage private capital into affordable housing. These limited, small scale, public-private ventures were the foundation for large scale public private partnerships under the HOPE VI program.\(^9\)

**Privatization**

In a free market economic theory that looks at housing as private commodity, rents and real estate prices should depend on the demand for housing units in relation to their supply. Given steady demand, more housing units should lower the price. This is not the case with New York because the luxury apartments being built are not intended for low income people in need of housing. New York’s experience shows that the free market has less interest in providing affordable housing units. Therefore, the government stepped in, starting NYCHA with public funds, subsidies and tax credits in order to support affordable housing. In recent years, the government has stepped back again as a result of its reduced budget, handing over the provision of affordable housing back to the private sector. Now it only uses tax incentives to stimulate the affordable housing supply.

The assumption was that the privatization of affordable housing could solve the problems of inefficiency and market malfunction during the early days of NYCHA. Offering public housing through NYCHA alone left residents no alternative, as there was no other public housing at the same rent or of better quality. The natural monopoly and lack of competition would result

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in the deterioration of the quality of service and maintenance (though this was also caused by the reduction of federal funds). This is confirmed by the complaints NYCHA residents had.

In contrast, the private affordable housing would be affordable to the middle and low income, and their income would depend partially on residents. Also, private landowners would use private capital for maintenance and provide services free from the government budget and its limitations. Private owners tend to care more about offering proper maintenance and service in buildings they own.

But privatization did not solve all the problems. One thing to mention is that lots of very low income people are excluded from privately owned affordable housing in the first place. While NYCHA is malfunctioning in the area of low rent public housing, the private sector is aimed at middle income residents. In this way, the government is holding back from offering more affordable housing itself. This raises the question: How can NYCHA continue to provide functioning affordable units, and what experience could be drawn from the private sector?

Significance

The history and policy on affordable housing was reviewed nationwide with a focus on New York City. Benefits, disadvantages, success and failure were discussed, including how property values would be affected by the design and management of affordable housing, the compatibility between affordable housing and its host neighborhood, and the spatial concentration of affordable housing.\textsuperscript{10} Policy analysis had been done previously, as with the federal HOPE VI program:

\textsuperscript{10} Mai Thai. Does Affordable Housing Detrimentally Affect Property Values? 2015
“Hundreds of profoundly distressed developments have been targeted for demolition, and many of them are now replaced with well-designed, high-quality housing serving a mix of income levels. There is substantial evidence that the original residents of HOPE VI projects have not always benefited from redevelopment, even in some sites that were otherwise successful. This can be partly attributed to a lack of meaningful resident participation in planning and insufficient attention to relocation strategies and services.”

However, the impact of those changing policies over the years, especially on people displaced by the privatization process, wasn’t studied. Instead, this could be taken as displacement engendered by the “invisible hand.” In this reading, NYCHA public housing would be replaced by newly constructed, privatized, mixed affordable housing units. This successful story is always told with an addendum of better social and racial integration and the creation of cleaner and safer space.

The reality, of course, is less appealing. New York Public Housing has a large number of challenges. With all this combined the author wants to study what privatized affordable housing could achieve and what NYCHA could do in the future to improve public housing units, learning from how private affordable housing started.

11 Susan Popkin, Bruce Katz, Mary Cunningham, Karen Brown, Jeremy Gustafson, Margery Turner. A Decade of HOPE VI: Research Findings and Policy Challenges. 2004
Literature Review

Affordable Housing – Federal Level

Affordable housing programs have been studied frequently, from the federal level to the city level. Public housing was introduced during the Great Depression as a social stabilizing tool. It emerged as result of slum clearance in New York City. Public housing was supposed to increase stability and address issues like crime and poverty in slums. However, a study done by tracing census tract data in the years before and after the public housing project shows that the presence of housing projects substantially increased the concentration of poverty in later years.

According to Orlebeke, who took a broader national view from 1949 to 1999, the evolution of housing can be roughly divided into two stages. The first stage runs from 1949 to 1973, including the provision public housing as a slum clear mechanism (“urban renewal”) and as a way to accommodate veterans. This period ends with President Nixon’s moratorium on subsidized production programs. The second stage was from 1973 to 1999, marked by a diminished federal leadership role and an increased state and local role. There is a new stage after 2000 when even state and local governments are stepping out, creating a housing gap not covered by any government authority.

In the 1990s, local and federal urban planners and advocates came to a consensus: the concentration of low-income, minority residents in public housing projects was a threat to the

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13 Massey D. S.; Kanaiaupunis S. M. Public housing and the concentration of poverty Wiley, Hoboken, NJ, ETATS-UNIS (1968)
city. They asserted that public housing projects had to be torn down and redeveloped for residents of mixed income.

**Affordable Housing in New York City**

Bloom pointed out in *Public housing that worked: New York in the twentieth century* that most public housing projects failed in the U.S. because too little attention had been paid to their management, yet in the 1950s the failure was blamed on bad design and its impact on behavior that triggered crime and safety issues. In general, it was thought that public housing projects could have been built and maintained to accommodate a wider range of income groups. As in the 1960s, the NYCHA projects had as over half of its tenants minority and welfare recipients, but this could also lead to challenges of drugs, crime, and violence. After studying statistics of over 35,000 residents, Dunworth and Saiger found that drug and violent offences are severe problems in housing developments, and the same offenses are of higher rates than in the adjacent census tracts. Frederick also had a different view from Bloom. He considers public housing a failure in respect of racially discriminatory practices in site selection and tenant assignment policies in public housing as a result of HUD’s lack of influence at the local level.

After 2000, NYCHA started to shift its focus from the very poor to the middle income group, as working class families started to occupy a larger percentage of NYCHA housing developments. Welfare recipients dropped to 20% of NYCHA’s total inhabitants. As Michael Garland comments, this shift coupled with the lack of funding led to a malfunction of existing

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NYCHA public housing.\textsuperscript{19} He also pointed out as Mayor de Blasio admitted in May 2015, NYCHA was broken. The estimated cost of repair was estimated at $170 million. In his new ten-year plan, however, there is no intention for city agencies to build or run the public housing: it will be all done by the private sector.\textsuperscript{20}

**Privatization and Displacement**

The issue of privatization and displacement has been greatly discussed, particularly in light of the doubling of New York City’s sheltered homeless population from 1997 to 2003. Brendan O’Flaherty explains this increase by noting that the government slowed the production of affordable housing units at the same time that there were more and more people in need of it in New York City after the Great Recession.\textsuperscript{21}

Privatization in general has 4 main benefits, as summarized by William T. Gormley in 1990: 1) Improved efficiency, 2) Reduction of political interference and limits, 3) Sufficient private capital, 4) Time saving. But critics also argue that there is a substantial increase in price and that politicians’ allies or relatives could be favored for lucrative contracts even if they are not be qualified to do the work. Competition could thereby be further reduced in an unfair and less transparent context.\textsuperscript{22}

In the privatization of public housing, one of the most influential federal programs to support privatization was HOPE VI, an initiative of the US Department of Housing and Urban


\textsuperscript{21} Brendan O’Flaherty. Fewer subsidized exits and a recession: How New York City’s family homeless shelter population became immense, 2006.08

Development begun in 1992. It was intended to redevelop failed modernist public housing projects into mixed-use, mixed-income communities under the influence of New Urbanism. Over 15 years, HOPE VI demolished 96,000 public housing units, and created 108,000 new units. Among them, 57,000 were affordable to very low income residents. In New York, Corcoran-Mullins-Jennison, a private company, undertook the revitalization and redevelopment of an obsolete NYCHA site. In general, the program is considered to have been successful, yet the HOPE VI program in New York tells a different story.

In 1996, the Prospect Plaza revision program in New York City was provided $22 million by HOPE VI. The purpose was to replace the dilapidated NYCHA “ghost tower” with over 200 market units along with 80 low-income affordable units. The NYCHA tower has been torn down, but no new construction was going on four years after the presentation of the development plan. Most of the residents had been moved to other sites.

In San Francisco, HOPE VI has been criticized by its Planning and Urban Research Association for privatizing affordable housing in the name of improving public housing. They noted that HOPE VI replaced public housing with fewer new units, especially units for the very poor. Further it also used federal money to demolish public housing and displace the poor. HOPE VI was also criticized by John McCrory for its private management and the fact that lots of redevelopment has been largely privately funded. In this context, officials have been accused of using federal grants to displace the poor and build new houses for affluent residents.

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23 **New Urbanism**, an urban design movement which promotes environmentally friendly habits by creating walkable neighborhoods containing a wide range of housing and job types
24 “FY2010 Budget” (PDF). United States Department of Housing & Urban Development. 2010
27 John McCrory. Little Hope in HUD's HOPE VI. May 1999
This paper asks: How can privatization help NYCHA improve its quality of service while at the same time providing a large number of affordable housing units to New York City? Private affordable housing functions with far less subsidy and purports to deliver a better living environment and quality. What of the private approach could be learned from and borrowed?

**Economic Analysis**

In addition to the literature review on affordable housing, an economic analysis review has also been done regarding housing as a public good and the process of privatization. According to neoliberal economic theory which views housing as a commodity, rents and price depend on the demand for housing units and supply from the free market. In theory, more available housing units on the free market would lower the price, while inadequate housing supply drives the price up. This theory is contradicted in New York where housing stock has been increasing steadily, but rent has been rising even faster. Has economics failed New York in terms of housing supply?

It has not completely failed us. One difference from theory is the fact that demand and supply did not exactly match -- the newly built luxury housing does not meet the needs of middle and low income home-seekers. Prices and rents keep rising, with newly built houses purchased largely by foreign investors or rented by those with higher than average incomes. New York City’s housing is thus marked by an evaporation of low-rent housing, greater recorded homelessness, and an increasingly aged building stock. Affordable housing could be seen as a special form of housing, as affordable often is taken to mean less than market value. Profit-

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oriented developers would not readily provide it, so affordable housing has to be provided by non-profit-oriented actors: usually, this means the government, which could contract provision out to the private sector or mandate it by law.

The early stage of affordable housing was government provision, with construction contracted to private entities. The cost of a good or service is the sum of the price of a good, transaction costs, the cost of finding information, and the cost of negotiation. Constant contract negotiation and required supervision cost government labor and resources. It is likely that public monitoring systems are generally less effective than their private counterparts. The government, in the face of tight budget constraints and a desire to reduce expenditure, thus begins to step out and move toward tax incentives, subsidies and zoning laws requiring affordable housing. This has led to the privatization of public housing.

Privatization has better internal efficiency but leads to further problems such as the quality of services: as private entities are led by profits, their profit-seeking nature could lead to lowered quality of service. Longer and more stable relational contracts would be needed to ensure greater quality, as one-time contracts do not usually guarantee quality. Longer contractual relationships would potentially improve the quality since, if work is done badly once, the chance to make future profits would be diminished.

A common legal reinforcement of the privatization of affordable housing provision is the introduction of a mandatory contract forcing private entities to provide services previously

provided by the government; zoning or New York’s 80/20 rule provide good examples of this. The 80/20 rule offers the incentive of a tax break in exchange for including affordable housing units as 20 percent of the total development. The incentive for producing quality affordable housing is that the affordable housing is within the larger property; its quality would therefore affect the general value of the property. If badly done, the profits from surrounding property would also be affected. A potential downside, however, is that regulation without other incentives could discourage private developers from building more units, thereby further reducing the overall housing stock.

On the other hand, Abed argues that the government is more likely to be corrupt and spend recklessly, as the money comes from taxpayers and there is no incentive to make extra profits by organizing more effectively. It is also argued that the reduction of government control would build better confidence among the public.³⁴

Methodology

The project research used three methods: site analysis, physical observation, and interviews with housing developers and NYCHA housing officials.

First, the research used Geographical Information System (GIS) and collected coordinate data to project and geocode all the available NYCHA sites. The purpose was to analyze the geographical distribution of NYCHA sites and make an estimation of possible sites for privatization and revenue opportunities.

Data from 345 NYCHA developments were used. The data were geographically overlaid and joined with 2014 American Community Survey (ACS) 5-year estimate statistics to analyze NYCHA sites. This analysis focused mostly on the number of units, location, physical components, public space, housing, and adjacent parks. Furthermore, financial data, including income and rent as provided by the Furman Center, were used to look into affordability.

With the site analysis done, the second method was a site visit. It was carried out in various NYCHA locations along with adjacent privatized housing projects to observe the physical layout, public space, and amenities in accordance with housing units and their relationship to the surrounding environment. Photographs were taken in order to identify different typologies in combination with Google satellite maps. Morningside Gardens and the NYCHA development on La Salle Street, both at the intersection of Morningside Heights and Manhattanville, are chosen as two sites for physical observation as one is public and the other is privatized affordable housing. Located right next to each other, each has a different pattern of land use, quality of space, and maintenance.
Finally, five-minute interviews with five residents from each of the two developments, a total of 10 residents, sought to understand concerns, problems, and changes that residents found most urgent. Interviews with the two developers were also done to understand the role developers play and to identify the main concerns and limits or challenges they are having. Furthermore, the interviews elicited ideas for how best to communicate among the parties and how their interests and benefits could be balanced.

**Data source**

GIS data of all housing developments was obtained from NYC open data while income data was taken from the American Community Survey.

The following graph shows the process of the site analysis:

For a more complete chart, see Appendix III.
The number of units and developments is counted through ArcGIS along with average incomes and rents for all of the developments. City wide, we can use average income in each typology and in both public and privatized housing estates in order to estimate what amount of subsidies or alternative funding sources could be produced by privatizing available land or how much more public housing units could be provided.

**Interviews**

The interview participants included 10 residents, one developer of affordable housing, and a representative of New York City Housing Authority with knowledge of the government’s role in the up-zoning and privatization process. Interviews focused on the perception of improved standards, the loss of affordable units, possible raised rents, and feelings about diversity and quality of service provided. Sunnyside Gardens was also included, as it was developed first under the Mitchell-Lama program and then privatized in the last decade; its residents therefore went through the process of privatization. They were also interviewed about major changes in rent, the population in the development, and management. The property management team was contacted to gain access to residents. In addition, the author had 5-10 minute conversations in the community center or open space with passing residents. He also attended in-person community board meetings, aiming for CB11, Manhattan Community Board 11 meetings and steering committee meetings.

Topics discussed with local residents included their sense of the need for property and living situation improvements, their feelings about the improved quality of the environment, and their concern about service privatization’s potential to bring about the increased rents as well as displacement and gentrification. The author wanted to find out whether or not their needs are being satisfied by private developers.
Topics discussed with the project developer surrounded their incentives for building affordable housing. He wanted to find out their views on profits in these situations and perceptions of how affordable housing affects property values.

Finally, the author met with experts on affordable housing to discuss the privatization process and share what I find in the analysis and interview with residents and developers. (Interview questions may be found in the appendix.)

Limitations

There are myriad limitations to this research. Only two sites were chosen, which may or may not represent the typical public housing and privatized affordable housing situation generally found in New York City. The interviews and site observation also not be more broadly applicable, being confined only to the site selected.

Furthermore, the interviews were only five minutes long plus some longer casual conversations. If longer in-depth interviews had been carried out, more information could have been collected. In addition, the study sites are limited to Manhattan, so it is possible that NYCHA sites in Brooklyn or Queens could lead to different findings. For example, the safety issue may be more of a concern to the residents in other locations. Finally, if interviews had been conducted with more developers, a more accurate sense of the costs of development as well as tax breaks may have been possible.
Findings and Estimations

When we look at the geographical distribution of NHYCHA units, we can see that they don’t cluster in the very expensive midtown or downtown Manhattan areas, or the cheaper far edges of the city. (Public housing chooses the combination of a relatively affordable rent area and good access of public transportation.) So, while privatizing the NYCHA lands has potential value, the use cannot only be focused on commercial, as only a small part of the units locate in dense neighborhoods with high average incomes. The use and privatization of the land has to be filled with other vibrant or profitable uses.

Average household income and rent of NYCHA (conventional public housing) developments

<table>
<thead>
<tr>
<th>Average Household Income</th>
<th>Rent/Income</th>
<th>Average Rent</th>
<th>Monthly Rent</th>
<th>Monthly Income per Household</th>
</tr>
</thead>
<tbody>
<tr>
<td>$23,310</td>
<td>23.89%</td>
<td>$5568</td>
<td>$464</td>
<td>$1,943</td>
</tr>
</tbody>
</table>

Source: US census data and NYCHA 2015 adopted budget

NYCHA has average household income of $23,310 (conventional public housing in bracket) and an average monthly rent of $464. In case of household income, NYCHA accommodates residents of the very low income averaged through all 343 NYCHA developments. In New York City, the average household income is $58,878. So NYCHA residents have household income of around 40% of the city average. When applying for housing units, NYCHA requires the family income to be less than income limits shown below:

<table>
<thead>
<tr>
<th>Person(s) in Family</th>
<th>Income Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$48,350</td>
</tr>
<tr>
<td>2</td>
<td>$55,250</td>
</tr>
<tr>
<td>3</td>
<td>$62,150</td>
</tr>
<tr>
<td>4</td>
<td>$69,050</td>
</tr>
<tr>
<td>5</td>
<td>$74,600</td>
</tr>
</tbody>
</table>

Source: NYCHA website
Spread of NYCHA Housing and the New York City Affordability Rate

Calculated by

(Rent/Household income)X 100

Sources: NYC Department of Planning, US Census data
When we take closer look at private affordable housing, we could see the active commercial space in use. In the Morningside Garden for example, the rent could be estimated by comparing with the adjacent commercial space for lease. Three of the spaces on Martin Luther King Boulevard and Amsterdam asked for $75, $75 and $77.14 per square foot per year, respectively. By averaging the rents, the estimated commercial rent in the development would be $75.71/SF/Year.

Estimation of how much extra income NYCHA could capture on one site

<table>
<thead>
<tr>
<th>Rent per Square foot</th>
<th>$75.71SF/Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Site Size</td>
<td>20,000 square feet</td>
</tr>
<tr>
<td>Total Rent</td>
<td>$1.5 million</td>
</tr>
<tr>
<td>Operating Cost and Property Tax</td>
<td>$0.35 million</td>
</tr>
<tr>
<td>Extra Income per unit</td>
<td>$1,278/unit</td>
</tr>
</tbody>
</table>

Source: Loopnet

The two commercial podiums are sized 50’ x 200’ each equaling a total rental space of 20,000 square feet. From the information above, an estimated cash flow of $1.5 million could be created each year. Deducting 4% tax and 20% operating expenses, the net income from the commercial would be around $1.15 million. The income could be used for the cost of contracted management, or, to put it another way, used to reduce the rent of each apartment. When we divide $1.15 million by 900 units, we would end up with $1,278/unit. That is to say, by renting the two 20,000 square feet of commercial podiums, the cost of each unit could be reduced by $1,278.
From our earlier analysis, the average rent of Satellite image of NYCHA housing, private affordable units are $1,284, proportionate commercial space could cover 99.5% of the rent. The result is not zero rent, but a management and maintenance quality increase in the rent amount. The advantage of this increase will be demonstrated in comparison with NYCHA housing facing Morningside Gardens.

A similar approach could also work for NYCHA. NYCHA started building public housing in 1934, and stopped new developments in 1974. According to US open data, NYCHA has 179,062 units, and 345 developments in New York City. Taking a typical site for example, the Development on La Salle, has 200 feet of street front on Amsterdam Avenue, 550 feet of street front on Broadway, and 800 feet between Amsterdam and Broadway. The total area of the NYCHA development on La Salle would be 300,000 square feet. So when a building with of 55
feet is used, a total area of 41,250 square feet would be feasible on the NYCHA site, which accounts for 13.8 percent of the NYCHA land. Using the same $75.71 per square feet rent for the area, a total gross revenue of 3.12 million could be gained. With same 20% operating expense calculation, $2.50 million of net income could be achieved at this particular NYCHA site. (Property tax is not deducted, As NYCHA development would generally be exempt from the property tax.)

This means if we max up the commercial or office development on this 1,800-unit NYCHA site in an ideal way, the rent could be reduced by $1,389 per unit. As the NYCHA towers have similar design guidelines for FAR, we can estimate a potential income by multiplying this number by the total 179,062 NYCHA units, ending up with $248.72 million. This would be almost 10% of the NYCHA’s budget. In an ideal situation, when all this money is used to provide new affordable units, this $248.72 million budget could be used to cross-subsidize another 18,069 units. The extra income could be used to hire better management teams, provide better open space, install the garbage and waste water collection system to make NYCHA development energy efficient, and reduce further costs. Alternately, they could simply increase the budget for replacement of older amenities.
Physical observation

Along with NYCHA public housing on La Salle 125th street, another private affordable development, the Morningside Gardens, in the adjacent area was chosen to observe the difference in physical space, and then the author carried out interview with the residents in both NYCHA housing and Morningside Gardens.

NYCHA housing:

Located on both north and east sides of the Morningside Gardens are the NYCHA housing developments, very typical tower in park layout, buildings facing southwest or northwest. Open on all sides to the street, creating semipublic space without full enclosure.

Source: Google image
Discussion: Why NYCHA public housing has strictly separated function

When NYCHA was built during the 1950s and 1970s, the designs were greatly influenced by Le Corbusier’s idea\(^\text{35}\) after World War II of super towers -- tall and dense apartments on built in acres of green open space. But these public housing designs have been rightly criticized for separating residents from the city and further the cutting the space from the fabric of the city. Indeed, Corbusier was criticized for the baroque urban planning in general.\(^\text{36}\) The good thing is that Corbusier-style central planning makes exact calculation of sunlight, air circulation and various space and ratio, this is scientific to an extent. His was efficient planning to build a city from nothing, and it could accommodate large numbers of residents. But there is no reference to the existing history, style or people’s daily lives.

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\(^{35}\) Le Corbusier, a Swiss-French architect, designer, painter, urban planner, writer, and one of the pioneers of what is now called modern architecture.

\(^{36}\) Scott, J. Seeing Like a State Ch. 4 “The High Modernist City: An Experiment and a Critique” 1998 Yale University Press

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Le Corbusier viewed the city from the air and this photo shows the ideal position of a planner. Planning to him is a power over the city, it decides the trend the future, the scientific plan from the well-educated architectural masters. Personal preferences like geometric simplicity and functional efficiency are implemented in his work and the projects influenced by him. Chandigarh is a good example, and the New York NYHCA housing is another good example. As he points out when functions are mixed up, the complexity would boggle the human mind, thus it gets confused and fatigued.

This could explain the layout of NYCHA’s typical public housing, tower-in-the-park typology, where no commercial or other use is allowed in the NYCHA developments from the 1930s to 1970s. This policy results in making public housing detached from the urban fabric, disrupting the urban texture. Planners can’t dictate is how people interact with space. For example, residents may act for their own best interest and comfort instead of following the planned stay in one 100% residential section. Similarly, they may not be able to afford Corbusier’s high speed roads to commute for work and recreation. For such reasons, the planning would simply fail to live up to expectations. This is not to avoid traffic and transportation planning. Rational calculation and prediction could be productive. Study and implementation could be combined to offer guidelines, computer models and quantitative analysis could offer good information and guide our planning. In other words, plans must be tested against reality.37

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37 Scott, J. Seeing Like a State Ch. 4 “The High Modernist City: An Experiment and a Critique” 1998 Yale University Press
When looking at NYCHA plan and common development between Broadway and Amsterdam, NYCHA has planned green space for the street front, but sometimes public facilities would be street front. But this was not in NYCHA plans, those parts were not to be included as part of NYCHA. Mostly there would be no commercial activity.

*Satellite image of NYCHA development on Broadway*

Source: Google map

Also, what makes NYCHA developments isolated patches instead of real public parks is the fact that the public is not offered access to the green space. And in order to keep minimum management, green space is usually fenced, and, unfortunately, filled with garbage.
Corbusian design theory had a big impact on NYC’s public housing projects, but not all of the problems in NYCHA projects are design issues. A dominant issue reflected by residents in the interviews was the issue of poor management. If residents complained about odorous hallway, they have to pay themselves for the cleaning. (Personal interview with NYCHA residents. 2015 August) As a further evidence of the impact of poor management or lack of funds. NYCHA residents have higher chance of getting lung disease because of mold or debris from walls\(^{38}\).

Another complaint from the interviews is that it takes too long for the maintenance team to take care of the problems. This reflects lack of funding, as available federal and city funds are reduced. The quality of the basic repair and clean job are reduced accordingly, and the planed open parks also become fenced green space with garbage. So what NYCHA units need is more

financial resources. Contracting management out could also be a way to increase efficiency.

Another issue the residents raise is safety, residents worry about getting out on empty streets at night. There are concerns of being attacked or robbed.

Morningside Gardens

Photo by Author

Morningside Garden was chosen to study, as it is now private, and was once under one of the affordable housing program (Mitchell-Lama housing program). It has six tall towers, half enclosing an open space. A visitor sees playgrounds, greenspaces and a parking lot. According to the residents, there is an indoor gym, storage units and recreation rooms. The costs for these are included in the maintenance fee so residents don’t have to pay extra money to use the facilities. People outside the cooperatives can also pay a fee to rent the community space or join the gym.

Typical tower in park typology, six 21 story towers, accommodating more than 900 units.
On the west side of the development, there are reserved parking lots, and the north and south sides have street parking. Parking also inserted into the space between the four north towers.

There is both community and commercial space within the development. As mentioned before, facilities like gym, workshop and recreational space in the buildings. And on the east side along the Amsterdam Avenue, there are 400 feet long commercial podiums, containing restaurants, a bank, and a grocery store.
Morningside Gardens: Street view of ground commercial

Photo by Author

Comparison of onsite observations

<table>
<thead>
<tr>
<th>Site</th>
<th>NYCHA Public Housing</th>
<th>Privatized Affordable Housing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Numbers</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Commercial Space</td>
<td>No</td>
<td>Street side ground floor retail</td>
</tr>
<tr>
<td>Maintenance of the Open Space</td>
<td>Dirty</td>
<td>Clean</td>
</tr>
<tr>
<td>Safety Guard</td>
<td>No</td>
<td>One guarding post, 10 management team members</td>
</tr>
<tr>
<td>Community Space</td>
<td>Indoor community center, Gym</td>
<td>Outdoor community space</td>
</tr>
<tr>
<td>Parking</td>
<td>Parking in open space, on street</td>
<td>On street parking, and limited parking space inside</td>
</tr>
<tr>
<td>Open space</td>
<td>Divided open in different sections</td>
<td>Enclosed open space</td>
</tr>
</tbody>
</table>
FINDINGS AND ANALYSIS

As shown in the data table, NYCHA’s conventional public housing has an average rent of $464/month, providing the most affordable units. This low rent is unrivaled by its private counterparts. Then NYCHA provide affordable housing for the very low income where the rent only accounts for 23.89% of household income. However, this is hardly sustainable with dwindling government funds. In 2015 NYCHA had a deficit of $98 million.

2015 NYCHA Financial Record - Revenues

<table>
<thead>
<tr>
<th>Revenue source</th>
<th>Amount($000)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rental Revenue</td>
<td>996,820</td>
<td>31.99%</td>
</tr>
<tr>
<td>Section 8 Subsidy</td>
<td>955,385</td>
<td>30.66%</td>
</tr>
<tr>
<td>Federal Subsidies</td>
<td>898,785</td>
<td>28.85%</td>
</tr>
<tr>
<td>Capital Fund</td>
<td>60,949</td>
<td>1.96%</td>
</tr>
<tr>
<td>Reimbursement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>City Fund</td>
<td>18,600</td>
<td>0.60%</td>
</tr>
<tr>
<td>Revenue from Operation</td>
<td>18,146</td>
<td>0.58%</td>
</tr>
<tr>
<td>other</td>
<td>167,080</td>
<td>5.36%</td>
</tr>
</tbody>
</table>

Source: NYCHA Financial Statement

Looking at the NYCHA financial data, we see that revenue from rents only accounts for 32% of the total. When rental and operating revenues are added, the other two thirds of revenue has to come from federal subsidy or section 8 subsidy. The city fund is less than 1%. What’s more, from 2011 to 2014, the federal funds dropped almost 40% according to the NYCHA Adopted Budget for FY 2015 And the Four Year Financial Plan FY 2016-2019. As the grants continue to drop, the quality of service will drop accordingly. Even maintaining the status quo of NYCHA conventional public housing is tough.
In private affordable units, household incomes are much higher than household income of NYCHA residents, and the rents are also higher. On average, the private affordability rate is 10% higher than the NYCHA conventional public housing, but close to the NYCHA average, setting a natural division of income level within the affordable units. When new plan or policy privatizes public housing, and adds in private affordable units, the original low income households are displaced. For example, in the effort to renovate and improve the affordable housing quality, HOPE VI and rezoning projects in the east Harlem had proposed replacing public housing with mixed market price units and 60% AMI affordable units. But since the debut of prospect plaza plan in 2011, five years passed without significant progress. Even with large amount of funding for rebuilding, the cost of maintenance remains high.
New plans consider combining public housing with leasable commercial space and privatized affordable units, funded by private entities. If implemented, more and more of the operating expenses could be offset by rent from the new parts. But often the result is fewer affordable units. For example, Prospect Plaza used to have more than 200 NYCHA units, but the new plan is expecting only 80 NYCHA units. The rest will be replaced by 280 private affordable residential units along with ground-floor retail, community facility space and open space.

According to the interview result, 80% of the residents think private ownership improves efficiency of maintenance and general performance, empirical evidence from economic studies also shows higher maintenance efficiency in the private sector.

An interview with LISC developer Colleen Flynn (Dec 18, 2015) further supports the findings:

In general, I think that our overall position in terms of average median income [AMI] and how to price rental should be based at the local level, but I don't think we have a formula. From our research I can tell that for quality of life it is better to have a mixed income neighborhood means definitely to improve quality of life. For a lot of tax credits, it is hard for some of those subsidies that we receive to go below 60% of AMI. You have to do a lot of cross-fertilization, many of our partners’ goals are to reach below 60% of AMI but it is hard to get this deeper affordability. In order to get it you need to get more subsidies.

From site observation, both NYCHA and the private affordable housing are typical tower in park typology. They have playgrounds and green space. But the quality and maintenance of the spaces are different. Private affordable development has well-maintained, clean public space as a result of sufficient financial resource from both rent, extra income from commercial and more efficient private management, while NYCHA spaces are fenced and filled with garbage. The lack of access, plants and cleaning decreases the quality of this open space, making NYCAH sites undesirable and isolated patches of the urban fabric as currently developed.

The use and incorporation of commercial space is another aspect where private affordable developments are different from the public ones. Private developers take advantage of the ground
floor commercial on main avenues to produce cash flow, which could benefit the maintenance, improving the quality and integration at the pedestrian level. While public NYCHA developments mostly are designated for only residential use, with some exceptions like public libraries or public schools.
Conclusions and Recommendations

As existing grants continue to drop, NYCHA should develop strategies to sustain itself. Infilling with median income affordable units would increase the Authority’s income. Developing commercial space on main roads also would be a strategy to produce more revenue for the management and maintenance of the existing public affordable housing. Further, by renting out land or leveraging private capital into the development (ground leasing) the Authority could gain extra revenue from building new commercial podiums on main avenues.

But commercial is not the only choice, and commercial has to be supported by enough residents in the surrounding area. Community space for business incubation or foot traffic uses like medical offices would also be good choice and enhance the prestige of the area.

In interviews, residents have negative feelings about the fact they live in public housing, with 6 of the 10 residents who came out from the housing denying they live in public housing. The negative impression could be improved by directly improving the quality of the park space. Perhaps if the park space could be incorporated by the city parks department, the maintenance would be taken care of. Based on maps, NYCHA development has fair amount of park space. If it were utilized and open to public, the space could be shared for public benefit, and increased quality in space and activity would reduce crime and safety concerns.

For better efficiency, management and maintenance could be contracted out to private managing firms. Bringing in private capital and competition would be a good strategy to reduce bureaucratic loss in efficiency.

As NYCHA residents are of lower income level, attention should be paid to the number of deep affordable units before and after the reconstruction. Creating more public housing away
from the central city with good transportation access could reduce the overall living cost. Reduced land cost could also be used for more deep affordable units. As New York City is expanding the public transportation system with new light rail and ferry service, the new accessible areas could be possible sites for cheaper public housing.

Map of new public transportation plan

Source: NYCEDC, NYCDOT
The cycle for redevelopment is relatively long at present. A phased and quicker cycle should be adopted for the minimal displacement and impact on existing residents.

To sum up, the privatization of public housing could solve lots of the problems it is currently facing. Segregated, low-income concentrated, and badly maintained public housing communities could be improved by leveraging private capital into building more private
affordable housing, or sourcing out the provision of public housing paying private sector with subsidy and tax reduction. However, private affordable housing has a much higher rent requirement for residents. So, when privatizing, a parallel rent limit would better suit the existing residents than the affordability rate. As for existing public housing, the good strategies used in private affordable housing could be taken into consideration. For example, mixed use development could cross-subsidize the deep affordable units. Further, since public housing provides fair amount of green space to New York City, the maintenance and integration could be cooperated with district and New York City department of parks.

More diversified developments could happen on NYCHA lands, and green open space could be shared with the whole neighborhood, especially with development in the central city. Also, NYHCA should provide more detailed financial information of each public housing development. Furthermore, the city could open up their operations to the private market for competition. NYCHA could also collaborate with universities to sponsor studies on how to effectively improve deep affordable housing units. Finally, communities should be more integrated in up zoning and redevelopment projects, so ideas and needs could be accommodated.
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Appendix I

Interview questions

Questions for residents:

1. Please say a little bit about who you are and your connection to affordable housing?
2. How do you feel about the changes in the affordable housing you live in?
3. What are the biggest challenges living here?
4. How do you feel about NYCHA public housing and the privatized NYCHA housing nearby or other developments using tax breaks (cite examples close by)?
5. How do you feel about affordability change and raised rent compared to better quality?
6. How you feel about the diversity of population here and residents of different income levels?
7. Please talk about the affordable housing policies and your feelings about those.

Questions for officials and developers:

1. Please say a little bit about who you are and your connection to affordable housing?
2. Tell me about the history of your organization’s involvement in public housing?
3. How you feel about the changes in the affordable housing you live in/that you’ve been working on?
4. What are the key assets and resources?
5. What are the biggest challenges?
6. How do you feel about NYCHA public housing and the privatized NYCHA housing or ones under tax breaks?
7. How you feel about affordability changes and raised rent?

8. How you feel about the diversity of populations here and mix of residents of different income levels?

9. Talk about the affordable housing policies and your feelings about those.
Appendix II

NYCHA 2013-2015 Financial Statement

Table 2: FY 2013 –FY 2015 Comparison

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>FY 14 vs FY 15</th>
</tr>
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<tbody>
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<td></td>
<td>YTD Actuals</td>
<td>Cur Mod Budget</td>
<td>Budget</td>
<td></td>
</tr>
<tr>
<td><strong>Revenues</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenue from Operations:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenant Rental Revenue</td>
<td>900,402</td>
<td>954,980</td>
<td>996,820</td>
<td>41,840</td>
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<tr>
<td>Other Revenue from Operations</td>
<td>18,146</td>
<td>18,330</td>
<td>18,160</td>
<td>(170)</td>
</tr>
<tr>
<td>Subtotal Revenue from Operations</td>
<td>918,548</td>
<td>973,310</td>
<td>1,014,980</td>
<td>41,670</td>
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<td><strong>Other Revenues</strong></td>
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<td>Federal Subsidies</td>
<td>830,264</td>
<td>789,032</td>
<td>898,785</td>
<td>109,753</td>
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<td>Contract-Based Section 8 Properties Subsidy</td>
<td>10,802</td>
<td>5,403</td>
<td>-</td>
<td>(5,403)</td>
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<td>Debt Services Subsidy</td>
<td>724</td>
<td>622</td>
<td>525</td>
<td>(97)</td>
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<td>Section 8 Phased Conversion</td>
<td>41,517</td>
<td>47,062</td>
<td>49,773</td>
<td>2,711</td>
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<td>Section 8 Management Fees</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>Capital Fund Reimbursements</td>
<td>101,751</td>
<td>74,408</td>
<td>69,849</td>
<td>(13,459)</td>
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<td>Interest on Investments</td>
<td>1,494</td>
<td>1,159</td>
<td>2,499</td>
<td>890</td>
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<td>Other</td>
<td>82,947</td>
<td>23,160</td>
<td>38,969</td>
<td>13,809</td>
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<td>Land Lease</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>Sandy Reimbursement</td>
<td>-</td>
<td>23,872</td>
<td>-</td>
<td>(23,872)</td>
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<td>Categorical Grants</td>
<td>16,922</td>
<td>11,531</td>
<td>4,303</td>
<td>(7,223)</td>
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<td>Section 8 Subsidy</td>
<td>933,571</td>
<td>879,751</td>
<td>955,385</td>
<td>75,634</td>
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<td>Section 8 Admin</td>
<td>63,019</td>
<td>62,121</td>
<td>69,675</td>
<td>7,554</td>
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<td>Section 8 Admin Reserve</td>
<td>-</td>
<td>-</td>
<td>3,758</td>
<td>3,758</td>
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<tr>
<td>City Funds</td>
<td>16,007</td>
<td>40,053</td>
<td>18,600</td>
<td>(21,453)</td>
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<tr>
<td>Subtotal Other Revenues</td>
<td>2,099,018</td>
<td>1,958,174</td>
<td>2,100,776</td>
<td>142,602</td>
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<td><strong>Total Revenues</strong></td>
<td>3,017,566</td>
<td>2,931,484</td>
<td>3,115,756</td>
<td>184,272</td>
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<td><strong>Expenditures</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
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<td><strong>Personnel Services :</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salary F/T</td>
<td>603,077</td>
<td>612,597</td>
<td>613,149</td>
<td>552</td>
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<td>Salary P/T</td>
<td>1,409</td>
<td>514</td>
<td>1,265</td>
<td>751</td>
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<tr>
<td>Seasonal</td>
<td>4,790</td>
<td>1,029</td>
<td>30</td>
<td>(999)</td>
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<tr>
<td>Overtime</td>
<td>92,901</td>
<td>58,271</td>
<td>74,550</td>
<td>16,279</td>
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<td>Shift Differential</td>
<td>1,711</td>
<td>1,395</td>
<td>3,346</td>
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<tr>
<td>Fringe</td>
<td>510,484</td>
<td>542,279</td>
<td>562,029</td>
<td>19,750</td>
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<tr>
<td>Retro</td>
<td>23,116</td>
<td>132</td>
<td>907</td>
<td>775</td>
</tr>
<tr>
<td>Other</td>
<td>16,726</td>
<td>19,484</td>
<td>16,245</td>
<td>(3,239)</td>
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<td>Subtotal Personnel Services</td>
<td>1,254,214</td>
<td>1,235,701</td>
<td>1,271,521</td>
<td>35,820</td>
</tr>
<tr>
<td><strong>Other Than Personnel Services :</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leases</td>
<td>36,036</td>
<td>38,483</td>
<td>40,576</td>
<td>2,093</td>
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<td>Supplies</td>
<td>58,584</td>
<td>66,175</td>
<td>60,741</td>
<td>(5,434)</td>
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<td>Utilities</td>
<td>570,237</td>
<td>576,557</td>
<td>593,180</td>
<td>16,623</td>
</tr>
<tr>
<td>Equipment</td>
<td>6,895</td>
<td>38,339</td>
<td>14,726</td>
<td>(23,613)</td>
</tr>
<tr>
<td>Contracts</td>
<td>165,079</td>
<td>185,570</td>
<td>147,612</td>
<td>(37,958)</td>
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<tr>
<td>Insurance</td>
<td>38,861</td>
<td>49,386</td>
<td>51,994</td>
<td>2,608</td>
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<tr>
<td>Section 8 Payments</td>
<td>964,451</td>
<td>956,982</td>
<td>955,354</td>
<td>(1,628)</td>
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<td>Payment in Lieu of Taxes</td>
<td>25,893</td>
<td>29,791</td>
<td>33,234</td>
<td>3,443</td>
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<tr>
<td>Debt Service</td>
<td>695</td>
<td>593</td>
<td>837</td>
<td>244</td>
</tr>
<tr>
<td>Other OTPS</td>
<td>64,260</td>
<td>34,657</td>
<td>44,170</td>
<td>9,513</td>
</tr>
<tr>
<td>Subtotal Other Than Personnel Services</td>
<td>1,930,991</td>
<td>1,876,533</td>
<td>1,942,424</td>
<td>(34,109)</td>
</tr>
<tr>
<td><strong>Total Expenses</strong></td>
<td>3,185,205</td>
<td>3,212,234</td>
<td>3,213,945</td>
<td>1,711</td>
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<tr>
<td><strong>Surplus Deficit</strong></td>
<td>(167,639)</td>
<td>(280,750)</td>
<td>(98,189)</td>
<td>182,561</td>
</tr>
</tbody>
</table>
Appendix III

The following graph shows the process of the geo analysis:

Then some explanation on how racial diversity is compared with the city level. Standard deviation is used in the calculation the difference of racial distribution of a census group to that of the city overall. It is usually used to measure how different a group in a development is different from the standard sample. We take New York City diversity and spread as the sample, assuming the city is a 100% equal spread all over.
Appendix IV additional Data on Mitchell-Lama

Firstly, for the broader view, I used the available data from NYU’s Furman Center to compare the number of units under Mitchell-Lama and LIHTC program since 1957 (see graph below). The number of NYCHA’s affordable units is not shown in the graph. As NYCHA started building public housing in 1934 and stopped new developments in 1974, now NYCHA has a total number of 179,062 units. So we can expect a curve filling the pre-1957 vacancy when Mitchell-Lama program didn’t exist, all the way to the 1974. We observe a gap between 1980 and 1988, when the federal funds dwindled. During this period, new construction of Mitchell-Lama and LIHTC, Low Income Housing Tax Credit units is almost zero. Only after 1988, did LIHTC start to act as a force to provide affordable units, steadily increasing until peaking in 2008. Whether looking at the 1973-1975 period or the few years after 2008, the number of new units is affected by the overall financial stability of the overall market, exhibiting irregularities and a sharp decline afterwards.
New units under Mitchell-Lama and LIHTC Program

Source: Furman Center

When the units under Mitchell-Lama and LIHTC Program are constructed

Source: Furman Center
Surprisingly, though LIHTC program started the only after 1988, LIHTC units date back to 1850, with large number of units constructed in year 1990, 1910, 1920 and 1930. This shows that lots of the units in the program are older buildings built over 50 years ago, concern should be raised about higher maintenance costs. While the Mitchell-Lama units were built around the time they join the program.

**New York Affordability Distribution**

The most unaffordable sections of New York City, where rent takes more than 50% of the household income, are shown as deep red clusters in the map below. Surprisingly, the most expensive, Manhattan, is the number one affordable borough among the five, with the lightest color in the map. And the immediate adjacent waterfront part of Queens and Brooklyn are also well below the 30% affordability line. This doesn’t mean rents are low, but contrarily, salary in these parts is enough to push rent percentage down the 30% line.

The majority light colored Manhattan affordable illusion reflects one thing, affordability is not the perfect standard concerning quality of life, segregation problem and possible displacement issues.
New York City Affordability Rate

Calculated by

(Rent/Household income) \times 100