

RESEARCH BRIEF | MARCH 2015

Creating Affordable Housing Out of Thin Air: The Economics of Mandatory Inclusionary Zoning in New York City

In May 2014, New York City's new mayor released an ambitious housing agenda that set forth a multi-pronged, ten-year plan to build or preserve 200,000 units of affordable housing. One of the most talked-about initiatives in the plan was encapsulated in its statement, "In future re-zonings that unlock substantial new housing capacity, the city must require, not simply encourage, the production of affordable housing in order to ensure balanced growth, fair housing opportunity, and diverse neighborhoods." In other words, the city intends to combine upzoning with mandatory inclusionary zoning in order to increase the supply of affordable housing and promote economic diversity.¹

¹ City of New York. (2014). Housing New York: A Five-Borough, Ten-Year Plan (p. 7). New York, NY. Retrieved from http://www.nyc.gov/html/housing/assets/downloads/pdf/housing_plan.pdf.





Inclusionary zoning—using land use regulation to link development of market-rate housing units to the creation of affordable units—is an appealing policy because it shifts some or all of the direct cost of building and operating affordable housing from the government to market-rate development, particularly when that development benefits from government investments and policy changes. The policy only works, however, if the market-rate units produce enough income to make the entire development, including the affordable units, financially attractive. In other words, the market-rate units need to “cross-subsidize” affordable units that charge below-market rents.

While the city has had a voluntary inclusionary zoning program (the Inclusionary Housing Program) since 1987, there are a number of open questions about how a mandatory program would operate and what effect it might have on the city’s housing market.

Under a voluntary inclusionary zoning policy, where a developer receives a density bonus for participating, a developer elects to participate if the benefit obtained from the bonus outweighs the cost of rent-restricting the required number of affordable units.

If an inclusionary policy is mandatory, however, it means developers can only escape the cost of providing affordable housing by electing not to develop at all. Developers will continue building new housing after the adoption of a mandatory program only if they are willing to absorb this cost by accepting a lower financial return, or if they are able to make up for this cost elsewhere, by bidding less for land or construction services, or increasing revenue by being able to build additional market-rate units. And while a mandatory program has the potential to generate more affordable units, unlike a voluntary program, a mandatory program

Voluntary Inclusionary Zoning In NYC

The city’s existing Inclusionary Housing Program is voluntary and allows developers to build bigger buildings in certain parts of the city in exchange for providing affordable residential units, either in their building or in another building in the same community district or within a half mile in an adjacent community district. The affordable units produced pursuant to this program must be affordable for the life of the additional building area that is built using the zoning bonus. This linkage creates units that are essentially permanently affordable, given the presumed long lifespan of newly built market-rate housing. According to data from the city’s Department of Housing Preservation and Development, this program has helped create almost 7,000 affordable units since its adoption in 1987.

runs the risk of suppressing some development altogether if the affordability requirement is too strict, and land owners and developers do not adjust to the changed economics.²

This brief describes the economic potential of a mandatory inclusionary zoning program to require the development of affordable units without public subsidy and identifies some of the possible challenges local governments will face in designing it, especially in a large city like New York with such a diverse set of local markets.³ In light of the statement in the city’s housing plan, we focus in particular on the potential of additional zoning density to cross-subsidize affordable

² Over the longer run, developers (and land owners) may well be able to adapt as necessary to changes in policies and economic conditions, even if unable to do so immediately following a policy change.

³ This brief only presents an economic analysis of the potential for mandatory inclusionary zoning tied to new zoning density. It does not address any possible legal issues that might arise from the imposition of any particular policy.



housing without relying on land prices to adjust or developers to accept lower financial returns. To better understand this potential, we constructed financial models of residential development in New York City using estimates of current market and affordable rents, construction and operating costs, and the financial returns developers need

to earn in order to pursue a building project.⁶ The models also allow us to explore the interaction among property tax incentives currently available to developers (namely the 421-a tax exemption), additional zoning density added through an upzoning, and different affordable housing requirements.

The 421-a Tax Exemption

The 421-a tax exemption offers property tax relief to developers and owners of rental and condominium buildings with at least four units in New York City. In Manhattan⁴ and many neighborhoods in the other boroughs closest to Manhattan—defined in the law as the “Geographic Exclusion Area” or “GEA”—a developer can qualify for the exemption only if she provides 20 percent of her units as on-site affordable housing (affordable at 60 percent of area median income if no other government subsidies are used).⁵ Outside of the GEA, developers qualify for the same exemption if they provide 20 percent of their units as affordable, but even fully market-rate buildings automatically qualify for a less-generous exemption.

Given the property tax burdens facing multifamily residential properties in the city (especially the higher burdens facing rental buildings),⁷ the 421-a exemption offers significant savings to market-rate landlords and condominium and cooperative owners. During the exemption period, a building’s property tax burden is based only on the pre-development value of the property, unless the value of the exemption is capped (see below). For developers providing affordable units, the exemption lasts either 20 or 25 years (including a phase-out period) after construction is complete, depending on the location, and there is no cap on the exemption’s value. Outside of the GEA, for developers who do not provide affordable units, the exemption lasts for 15 years (including a phase-out period), and the value of the exemption is capped. The 421-a exemption is set to expire in June 2015 if the state legislature does not renew it.

⁴ As a result of restrictions imposed by New York City Council, the 421-a property tax exemption is not generally available in the parts of Manhattan that are zoned for very high-density commercial development (with commercial floor area ratio equal to 15), which are located in the Midtown and Downtown commercial districts. However, legislation enacted by the New York state government in 2013 specifically made five development sites in these parts of Manhattan eligible for the 421-a exemption.

⁵ If the project uses certain other types of government subsidy, the affordable units can serve households earning up to 120 percent of AMI, but for buildings with 25 or more units, the average affordability level of the affordable units cannot exceed 90 percent of AMI. Developers inside the GEA can also qualify for less-generous exemptions by purchasing certificates generated before 2008 from affordable housing developers under a now-defunct off-site affordable housing option.

⁶ The assumptions we use in our models are based on information compiled from interviews with residential developers and other industry experts active in New York City. Those interviewed identified a range of costs and rents, within which we selected specific estimates to use in our models. A full list of these assumptions is included in Appendix A of our full report, *Inclusionary Housing Policy in New York City: Assessing New Opportunities, Constraints, and Trade-offs*.

⁷ For an overview of New York City’s property tax system, see *Distribution of the Burden of New York City’s Property Tax in State of New York City’s Housing and Neighborhoods 2011* (pp. 7-28). New York City: Furman Center for Real Estate and Urban Policy.



As we discuss below, we find that a mandatory inclusionary zoning program tied to increased zoning density in high-rent neighborhoods has the potential to spur the development of affordable units. In many neighborhoods with lower rents, however, adding zoning density will be unlikely to produce new affordable housing, at least not without additional subsidy. We also note the significant impact that the 421-a property tax exemption has on the ability of market rate rental units to support the creation of affordable units.

While the city will need to consider many other issues that are unrelated to the economics of the program—such as how much additional density should be added in different locations, given existing infrastructure and transportation constraints, the possible effects of additional development on current residents, and legal issues—our analysis estimates the potential of inclusionary zoning tied to upzonings to produce affordable units in different neighborhoods and highlights some of the economic constraints and trade-offs between policy options the city faces as it crafts its new program. For a longer discussion of our findings and for the assumptions we make in the modeling, please see our full report, *Inclusionary Housing Policy in New York City: Assessing New Opportunities, Constraints, and Trade-offs*, available at http://furmancenter.org/files/NYUFurmanCenter_InclusionaryZoningNYC_March2015.pdf.

In neighborhoods with high rents, mandatory inclusionary zoning with an increase in density can encourage the development of more affordable housing without any additional subsidy.

The additional density that an upzoning adds to a neighborhood can be extremely valuable to developers if, as a result, they are able to build more market-rate apartments. In many cases, this value can offset the cost of providing affordable housing, creating new opportunities for mandatory inclusionary zoning to help generate affordable units without direct subsidy.⁸

Development costs and the value of additional zoning density

In order for additional zoning density to have value that can cross-subsidize affordable units, the revenue from additional floor area, net of operating costs, must, at the very least, provide a sufficient financial return on the construction costs a developer would have to incur to build that floor area. More fundamentally, rents must be high enough to generate a sufficient return on the development costs for the whole project to justify construction of any building in the first place. Because high-rise and mid-rise construction in New York is extremely expensive, it requires high rents to generate this return. Given the wide range of market rents in New York City neighborhoods, this means additional zoning density will be extremely valuable to developers in some areas, but may have little or no value in others.

⁸ To be clear, even without an upzoning, mandatory inclusionary zoning can, in many cases, lead to the development of affordable units without direct subsidies, if rents are sufficient to justify the development costs. However, without an upzoning (or some other new benefit), the cost of providing units at below-market rents would need to be made up entirely through reductions in land prices or construction costs or by the developer accepting a lower financial return. Without opining on how this might affect the new construction pipeline, our analysis focuses only on the capacity of additional zoning density to cross-subsidize additional affordable units without affecting land values or developers accepting lower financial returns.

Table 1: Current market rent (per rentable square foot per year) required to generate minimum financial return, by building type, affordable set-aside, and property tax status

	100% Market-Rate Building		20% Affordable* Building
	A	B	C
	Full Property Taxes	No Property Taxes	No Property Taxes
High-rise construction***	\$61 (\$3,600 for a 1BR unit**)	\$39 (\$2,400 for a 1BR unit**)	\$45 (\$2,700 for a 1BR unit**)
Mid-rise construction	\$54 (\$3,200 for a 1BR unit**)	\$33 (\$2,000 for a 1BR unit**)	\$38 (\$2,300 for a 1BR unit**)

*Affordable to households earning 60 percent of AMI, **Approximate rent for a one-bedroom unit of 720 square feet, *** Outside of Manhattan

Table 1 estimates just how high rents must be for a developer to incur the “hard” and “soft” construction costs for different types of rental buildings,⁹ based on our assumptions about construction and operating costs and necessary developer returns. These estimates do not take into account the additional cost of acquiring the land, which can vary widely between neighborhoods and from site to site. In fact, the minimum rents shown in Table 1 would not allow for the developer to incur any cost for land and still achieve her minimum financial return on a mid- or high-rise project, so rents would have to be even higher than those in Table 1 for a developer to undertake a project in the first place, with or without any added zoning density.

The estimates in Table 1 also represent the rents needed for added density to generate an acceptable financial return on its required construction costs. Our model assumes that the construction costs for adding additional apartments to a potential project are the same as the construction costs for all the other apartments (meaning, for example, that building the 201st unit of a high-rise costs the same as building each of the first 200 units). Where rents are below these levels, adding more units to a potential development (which requires

no additional land costs) would not generate an attractive return, so no amount of additional zoning density is likely to spur development or have any capacity to cross-subsidize affordable housing, given current rents and construction and operating costs.

As Table 1 shows, our model estimates that rents must exceed \$61 per rentable square foot per year for a high-rise project subject to the city’s full property tax to provide a sufficient financial return on its construction costs. For fully taxed, mid-rise development, rents need to be at least \$54 per rentable square foot per year. These rents roughly translate to one-bedroom apartments with monthly rents of \$3,600 and \$3,200, respectively, which require two-person households to have incomes of 220 and 190 percent of the New York City metropolitan area median income (AMI) using typical affordability guidelines.¹⁰ In each case, rents would need to be even higher to also provide a return on land costs.

⁹ Our financial models only analyze the capacity of upzonings to produce affordable housing in rental buildings. Condominium projects are an important segment of the market, especially in some of the city’s most expensive neighborhoods, but we have focused on rentals because they make up the great majority of all new multifamily development in New York City. The economics of a condominium development are different in a number of ways from those of rental development, making it impossible to extrapolate from the models described here the ability of condominium developments to cross-subsidize affordable units.

¹⁰ In 2014, the median income for a two-person household in the New York City area (which, as defined by federal guidelines, includes New York City and Putnam, Rockland, and Westchester counties) was \$67,200.



By reducing annual operating costs, a property tax exemption significantly lowers these rent thresholds, as can be seen by comparing columns A and B in Table 1. As column B shows, for high-rise development that owes no property taxes to generate an attractive financial return on the construction costs, rents must be higher than \$39 per rentable square foot per year (roughly \$2,400 for a one-bedroom apartment). For mid-rise developments, rents must be higher than \$33 (roughly \$2,000 for a one-bedroom apartment). These rents would be affordable to two-person households earning 140 and 120 percent of AMI, respectively. Again, however, these rents do not take into account land costs; so the rents represent only a lower bound of what would be needed to justify the purchase of a site for development.

Inside the 421-a GEA, in order for development to qualify for tax exemption, 20 percent of the units must be made affordable to households earning 60 percent of AMI. So for rental projects that participate in the 421a program in Manhattan and some of the most expensive neighborhoods of the other boroughs, 20 percent of any additional zoning density added to a rental development already needs to be affordable even without a new mandatory inclusionary zoning program. Column C of Table 1 shows that this affordable housing requirement increases the threshold market rent by \$6 for high-rise construction, to \$45 per rentable square foot per year, and by \$5 for mid-rise construction, to \$38. These roughly translate to monthly rents of \$2,700 and \$2,300 for a one-bedroom apartment, which would be affordable to two-person households earning 160 and 140 percent of AMI, respectively.

Additional density in high-rent neighborhoods

Where market rents safely exceed the minimum rent thresholds in Table 1, rental revenue from new development will be enough to provide a minimum financial return on the required construction costs and, in many cases, the cost of buying a vacant or underused development site.

How Our Model Approaches the Developer’s Return on Investment

Our model assumes that developers need to earn a minimum financial return in order to undertake a potential rental project. There are many alternative measures of financial return, but our analysis focuses on one common metric: the stabilized net operating income yield (NOI yield). This measure is equal to total rental revenue, less operating costs, in the first year the building is fully occupied, divided by the total development costs, including “hard” and “soft” construction costs and the amount paid for land. However, when we model the return generated by incremental density made possible by an upzoning, these costs only include the additional construction costs, because no additional land acquisition is required. We assume in our models that developers require an NOI yield of at least 5.25-5.75 percent depending on the building type and location. So as long as additional density generates this financial return, it will not negatively affect the viability of the overall project. We of course cannot say with certainty that developers will not choose to build at a lower NOI yield. But if a new inclusionary zoning policy pushes the projected yield below this threshold, there is a risk that developers may simply postpone developing the site with the expectation that market conditions will improve or policies will change over time.

Recent development activity and lease data provided by Miller Samuel Real Estate Appraisers & Consultants make clear that prime New York City neighborhoods have such rents, including not only Manhattan (excluding the northernmost neighborhoods), but also much of northern Brooklyn, and parts of western Queens.



Table 2: Analyzed Market Types

Very Strong, inside the GEA	\$80 per rentable square foot (1BR: \$4,800/mo)*	Manhattan Core (below 110th St.)
Strong, inside the GEA	\$60 per rentable square foot (1BR: \$3,600/mo)*	Williamsburg Upland
Moderate, inside the GEA	\$44 per rentable square foot (1BR: \$2,700/mo)*	Astoria
Moderate-low, inside the GEA	\$37 per rentable square foot (1BR: \$2,280/mo)*	Bedford-Stuyvesant
Moderate-low, outside the GEA	\$37 per rentable square foot (1BR: \$2,280/mo)*	Bedford-Stuyvesant, Flushing, other relatively strong markets outside the GEA

*Approximate monthly rent for a one-bedroom apartment of 720 square feet

In these neighborhoods, upzonings will almost certainly be able to create new opportunities to use zoning to increase affordable housing without direct subsidies. If market rents are high enough to provide an attractive return on construction costs and the cost of buying a development site under current zoning, then allowing developers to build even more apartments without acquiring additional land means that some of the revenue from the additional density can be used to cross-subsidize affordable housing within the project, without affecting developers’ financial returns or how much they can afford to pay for the land. Of the six neighborhoods the city has announced will be subject to a new mandatory inclusionary zoning program, at least two (East Harlem and Long Island City) appear to have rents high enough for there to be the potential for additional density to cross-subsidize additional affordable units.

To better understand the potential of additional density in high-rent neighborhoods to cross-subsidize affordable housing, we analyzed development in the five market types listed in Table 2, which are based on specific city neighborhoods, but not meant to be fully representative of all high-rent parts of the city¹¹ and which may or may not be studied by the city for upzoning.

For each of these market types, we estimated the “on-site cross-subsidy potential” of additional

¹¹ Our estimates of current market monthly rent per rentable square foot are based on the Miller Samuel lease data and interviews with New York City developers.

mid-rise and high-rise floor area that an upzoning would generate, given these estimates of market rents. This is the percentage of the additional floor area (not the entire project) that, given market rents and construction and operating costs, can be made affordable to households of a given income and still produce the minimum financial return our model assumes developers require in order to build. In other words, the development of these affordable units can be fully cross-subsidized by the market-rate portion of the additional density. As long as a development project would have generated a sufficient financial return on development costs without the upzoning, we estimate that building additional density with this percentage of affordable units would also be financially feasible. Because all of the revenue from the additional floor area made possible by the upzoning would be needed to provide the minimum return on the additional construction costs and to cross-subsidize additional affordable housing, the added density would not allow the developer to earn a higher rate of return on her investment or pay any more to buy the development site.¹²

The on-site cross-subsidy potential varies quite a bit across different combinations of construction type and market type and between fully taxed

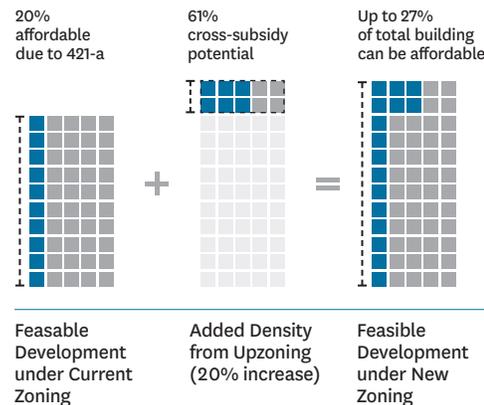
¹² In cases where an existing building proves too valuable to tear down despite high rents, the city may wish to encourage redevelopment by granting additional zoning density without requiring as much additional affordable housing. Assuming market rents in the neighborhood exceed those in Table 1, this would allow the developer and landowner to capture some of the value created by the additional density, making site acquisition, demolition, and development more likely.

and tax-exempt developments. (The cross-subsidy potential also depends on the level of affordability the units serve, as discussed below, but for this part of the analysis we assume affordability to households earning 60 percent of AMI.) For high-rise development subject to the full property tax, the on-site cross-subsidy potential in our very strong market type is large enough that the city could require that 28 percent of the *additional* units be affordable to households earning 60 percent of AMI. With the 421-a property tax exemption, the cross-subsidy potential at this affordability level would be a much higher 61 percent (of which 20 percentage points would be required for the building to qualify for the exemption under current law, because this market type is inside the GEA).

In our strong market type, the on-site cross-subsidy potential of fully taxed additional density is only eight percent for high-rise development and 19 percent for mid-rise development, which has significantly lower construction costs. With 421-a property tax exemption, the cross-subsidy potential is again much higher: 52 percent for high-rise and 62 percent for mid-rise development (in each case, 20 percentage points of which would be required by 421-a).

With lower market rents, the cross-subsidy potential is only 36 percent in our moderate market and 15 percent in our moderate-low market, for mid-rise projects with the 421-a property tax exemption. For development inside the GEA, this 15 percent cross-subsidy potential in the moderate-low market is too low even to maintain the 20 percent set-aside required to qualify for the exemption under the current 421-a law, so development is unlikely with or without additional density. Added density would not generate any cross subsidy at all for projects in the moderate and moderate-low markets if subject to the full property tax.

Figure 1: Potential affordable set-aside* for high-rise development site with property tax exemption in very strong market after 20 percent upzoning



*Affordable at 60 percent of AMI

The potential for higher affordable set-asides

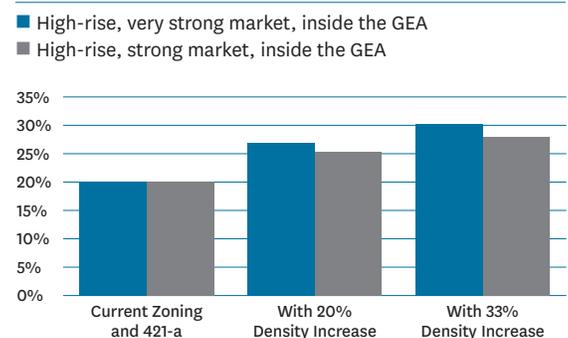
Because the cross-subsidy potential we estimate applies only to additional density, translating this percentage to an affordable set-aside for an entire building depends on the magnitude of an upzoning. For example, we can consider a potential high-rise building project with 421-a property tax exemption in our very strong market that would currently be considered financially feasible, meaning that it would generate a sufficient financial return on the costs of construction and buying land. Because this market type is inside the GEA, the project would need to be 20 percent affordable to households earning 60 percent of AMI to qualify for the property tax exemption under the current law (assuming it does not use other types of government subsidy). Now we assume the site is upzoned by 20 percent. The cross-subsidy potential for additional density added to high-rise construction in the very strong market type is 61 percent, meaning that percentage of the additional density can be affordable without decreasing the developer’s financial return or the amount she can afford to pay for the site. As Figure 1 helps to illustrate, because the building is bigger, 20 percent of the incremental units (2 units here) would need to be affordable so that

the overall project continues to comply with the requirements of 421-a. An additional 41 percent of the incremental units (4 units here) can also be made affordable because of the 61 percent cross-subsidy potential. The now-larger building will have a total of 16 affordable units, which is 27 percent of the building overall.

Figures 2 and 3 translates the on-site cross-subsidy potential of different market types to high-rise and mid-rise projects under various upzoning scenarios, assuming the continued availability of a 421-a property tax exemption and, in each case, affordability to households earning 60 percent of AMI.¹³ For example, if upzoned by 33 percent,¹⁴ high-rise projects in very strong market neighborhoods inside the GEA, that would currently generate a sufficient financial return, could have their set-asides increased from 20 percent (required by 421-a) to 30 percent. High-rise projects in our strong market type, which has a lower cross-subsidy potential, could have their affordable set-aside requirement increased to 25 or 28 percent depending whether the upzoning increased the zoning density by 20 or 33 percent, respectively.¹⁵

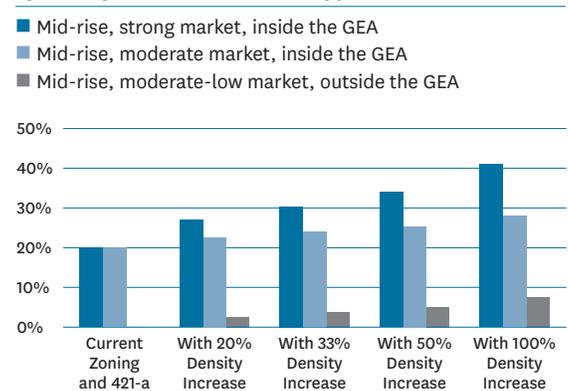
Land in zoning districts that currently permit mid-rise projects can generally be upzoned more than land where high-rise development is already permitted; so, the upzoning scenarios shown in Figure 3 cover a wider range of density increases, from

Figure 2: High-rise Buildings: Potential affordable set-aside* with property tax exemption, by density increase and market type



*Affordable at 60 percent of AMI

Figure 3: Mid-rise Building: Potential affordable set-aside* with property tax exemption, by density increase and market type



*Affordable at 60 percent of AMI

20 percent to 100 percent (a doubling of density).¹⁶ For a mid-rise development site, the cross-subsidy potential in our strong market would allow the affordable set-aside to be increased from 20 percent (required by 421-a) to 34 percent, if the density were upzoned by 50 percent, and to more than 40 percent, if the zoning density were doubled.

13 When the upzoning also incorporates a change in the allowable use, say from manufacturing to residential, the proportion of units required to be affordable could be higher than we estimate here, because of the increased value of the base density resulting from the new allowable use. This requirement should be applied without reducing the amount a developer could have afforded to pay for the site to develop it under the prior zoning.

14 For example, upzoning land currently zoned as R6A to a R7A zone would increase its permitted floor area ratio from 3.0 to 4.0, a 33 percent increase.

15 Because high-rise development is generally possible only in zoning districts that already permit very high density, upzonings are unlikely to increase the size of a potential high-rise by much more than 33 percent, if that much. In fact, state law currently prohibits residential development from exceeding a “floor area ratio” (FAR) of 12 for the zoning lot, and many high-rise projects are built in zoning districts with a maximum residential FAR of 10.

16 Of course, an upzoning can only add so much floor area to a mid-rise project before it becomes a high-rise. For zoning districts that are upzoned so much that the most likely development type changes from mid-rise to high-rise, the per-foot cost of construction for the entire building would substantially increase. This extra cost means not all of the value from the additional zoning density would be available to cross-subsidize affordable housing; so, a mandatory inclusionary policy could not require as much affordable housing as suggested by Figure 4 unless land costs dropped or developers accepted a lower financial return.

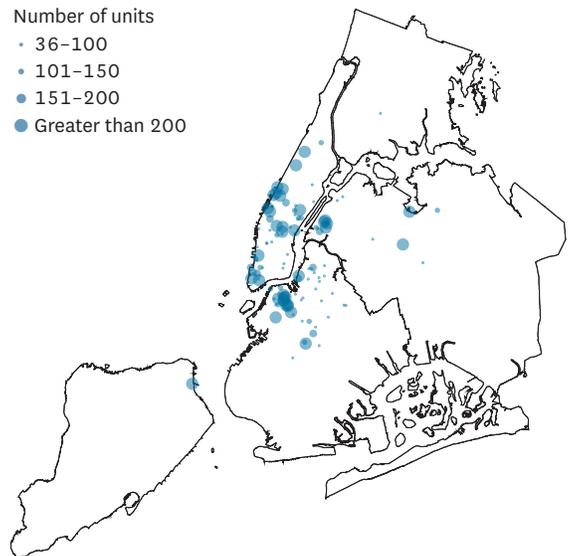
With lower on-site cross-subsidy potential, the increases in the affordable set-aside that upzonings could support in our moderate and moderate-low market types are much smaller.

In our moderate-low market type, if located outside the GEA, no affordable housing would be required to qualify for property tax exemption under current 421-a rules, and the on-site cross-subsidy potential for affordability at 60 percent of AMI is relatively low. As a result, as Figure 3 shows, even if the zoning density were doubled, we estimate that the additional density would only support an affordable set-aside of up to eight percent of the whole building without affecting the financial feasibility of the project.

In lower rent markets, mandatory inclusionary zoning is not likely to result in more affordable units, even with an increase in density, unless complemented with subsidy.

Large sections of New York City do not have sufficient market strength for high-density mixed-income development to be viable without other forms of subsidy, even if already eligible for the generous 421-a property tax exemption. In many parts of the city, even fully market-rate mid-rise or high-rise buildings are not currently being built because rents are below the thresholds identified in column B of Table 1. In these areas, which likely include at least two of the six neighborhoods the city has indicated will be subject to a new mandatory policy (East New York in Brooklyn and the Jerome Avenue Corridor in the Bronx), no amount of additional zoning density is likely to spur new development without additional subsidy, even if there are no new affordable housing requirements. Adopting mandatory inclusionary zoning in these neighborhoods would neither encourage developers to produce affordable units (without other forms of subsidy) nor inhibit market-rate development for those property types which would likely

Figure 4: Location of multifamily market-rate development currently under construction (as of January 2015)



Source: Reis

be financially infeasible even without the policy as long as current rent levels and construction and operating costs apply.

Recent leasing data do not provide much guidance about which neighborhoods clearly fall below the market rent thresholds in Table 1. However, the current development pipeline provides some insight about developer expectations for rents in relation to construction costs and the additional expense of site acquisition. Figure 4 shows the location of market-rate multifamily development projects, including those that have used 421-a, that are currently under construction as of mid-January 2015, based on data provided by Reis (a real estate industry data provider). The map shows that current construction activity is heavily concentrated in Manhattan and the neighborhoods of Brooklyn and Queens closest to Manhattan. Only a small number of projects are located in other neighborhoods, including Flushing, Queens and central Brooklyn, suggesting that, even where zoning permits, few developers have expected market rents or unit sales prices outside of these areas to be high



enough to generate a satisfactory return on multi-family development. In much of the city, upzonings may make sense for long-term planning purposes and to accommodate larger subsidized buildings, but they do not appear to hold much potential for cross-subsidizing affordable units because even fully market-rate buildings are not currently being built in these areas.

Additionally, there are some neighborhoods in which mandatory inclusionary zoning may inhibit market-rate development by increasing the threshold rent at which developers will choose to build. Table 1 shows that a 20 percent affordable set-aside at 60 percent of AMI increases the threshold rent for property tax exempt development by six dollars per rentable square foot for high-rise construction and five dollars for mid-rise construction. A larger set-aside or deeper affordability requirements would raise the thresholds even more. In neighborhoods with market rents in this range, developers may now seek to build fully market-rate developments, but they may opt not to build if they are required to include a significant component of affordable housing at, say, 60 percent of AMI.

In neighborhoods where rents are too low to allow for a cross-subsidy of units serving low-income households, policymakers could reduce the risk of suppressing development by adopting a mandatory policy with different requirements from those in high-rent areas. For example, a mandatory inclusionary program could require that the affordable units be aimed at moderate- or middle-income households, which require relatively little cross-subsidy in neighborhoods with moderate market rents, significantly lowering the range of rents where such a policy might stifle development. Such an approach would not serve the low-income households that have the greatest challenge finding housing, but may still promote economic diversity and could create permanently affordable units in neighborhoods that might see rents rise

in the future. Alternatively, the city could choose to supplement a program with a reliable source of direct subsidy to make sure it does not stifle development while rents are still too low to provide an internal cross subsidy. The city could require a minimum affordable set-aside and offer subsidy to new development until the point at which it deems rents are high enough for market-rate units to fully cross subsidize the income-restricted units.

The economics of mandatory inclusionary zoning will change as rents, operating costs, and construction costs shift over time.

The cross-subsidy potential we estimated above for additional density in different market types reflects a specific set of assumptions regarding construction costs, operating costs, and rents at a single point in time. As these factors shift relative to one another, the value of additional zoning density and its capacity to cross-subsidize affordable units will change. This poses a significant challenge for policymakers designing a policy intended to be in place over time.

If rents rise more rapidly than construction and operating costs over time, developers and land-owners will be able to reap greater profits than were possible when the city adopted a mandatory inclusionary zoning program and set its affordable housing requirements. For example, a neighborhood may be similar to our moderate market type when upzoned by 50 percent, in which case, assuming the availability of the 421-a property tax exemption, we estimate it could be made subject to a new mandatory inclusionary zoning policy with a 25 percent set-aside affordable to households earning 60 percent of AMI (see Figure 3). However, if rents subsequently rise, the neighborhood may become more analogous to our strong market type. Under these circumstances, for any sites not already developed, the higher rental income would not translate into any additional affordable units beyond the 25



percent set-aside, even though the cross-subsidy potential of the added density would now be substantially higher. Instead, the higher rents would result in higher land costs or developer returns.

Declining rents or increasing construction costs could have the opposite effect, reducing the cross-subsidy potential of additional density. In this case, developers would still have to meet the higher set-aside requirement, even as the value of the additional density dropped, leading to a reduction in developer returns or the amount they are willing to pay for land. In more extreme cases, a change in the market could transform marginal development projects into ones that no longer allow for minimum financial returns even if land prices fall, thereby stifling development.

If the city wishes to ensure that a new mandatory policy will not exacerbate the possible effects of ordinary fluctuations in the market, it could consider building in flexibility measures. For example, one of the city’s options is to permit waivers to a policy where developers are able to establish that projected market rents are insufficient to cross-subsidize the affordable units that would ordinarily be required, and still provide a commercially reasonable financial return. This would make it easier for the city to set relatively strong affordability requirements because it would retain the ability to grant relief based on market conditions.

One downside of this approach is the uncertainty it could introduce, possibly discouraging investment when development relies on the outcome of a discretionary decision to grant a waiver. Another downside is the risk that the decision to grant waivers becomes politicized or that waivers become routine, potentially making it difficult for the city officials to impose a policy’s full affordable housing requirement even where justified.

Policymakers must also consider how to address markets where rents rise relative to construction and operating costs after the adoption of an inclusionary zoning policy. One approach might be a policy mechanism that automatically adjusts inclusionary zoning requirements (e.g., the incomes served by the affordable units or the size of the set-aside) as the potential for market rate units to cross-subsidize affordable units increases. Such mechanisms, however, require a reliable barometer of market strength and development and operating costs, and can be difficult to design with all the possible factors and outcomes in mind. Such a mechanism could also be subject to political pressures. In neighborhoods where markets are too weak for there to be the potential for cross-subsidy when a policy is adopted, but where subsequent rent increases result in capacity for market-rate development to cross-subsidize affordable units, the city should ensure that the availability of any supplemental subsidy declines.

Table 3: Present value* of foregone revenue from rent-restricting 1,000 rentable square feet of floor area at 60 percent of AMI, by market type

	60% AMI
Very strong market	
With 20 year property tax exemption	\$1,189,984
Strong market	
With 25 year property tax exemption	\$806,369
Moderate market	
With 25 year property tax exemption	\$428,149
Moderate-low market (outside the GEA)	
With 15 year property tax exemption	\$330,678

*See footnote 17

A Program Can Use the Cross-Subsidy Generated by Additional Density in Different Ways.

Where additional density has the capacity to cross-subsidize new affordable units, policymakers must make a number of choices as they craft a mandatory inclusionary zoning policy. While the choices will be guided by the underlying goals of the policy set by the city, the economics of development can provide some insight into some of these choices.

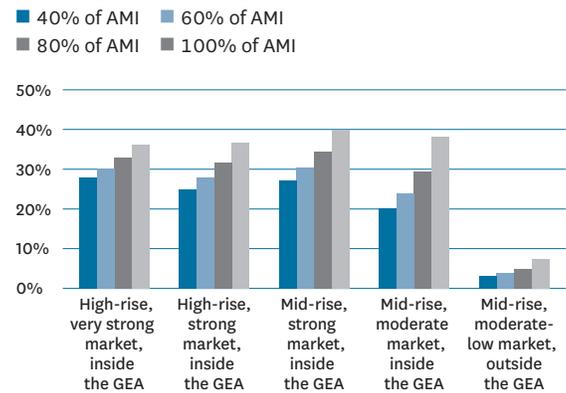
On-site vs. off-site vs. fee-in-lieu of payment

When a developer agrees to provide affordable housing by charging a below-market rent for a unit, she gives up the difference between the market rent and the restricted rent, which can be a significant sum depending on market strength. In Table 3, we estimate the present value¹⁷ of the foregone revenue resulting from rent-restricting 1,000 rentable square feet of floor area with property tax exemption in different market types to be affordable to households earning 60 percent of AMI. For a new building in our very strong market type, the cost to a developer of rent-restricting 1,000 square feet to be affordable to households earning 60 percent of AMI is about \$1.2 million for a building with a 421-a property tax exemption.

A developer participating in an inclusionary zoning program requiring this type of rent-restriction may be just as willing (or perhaps more willing) to comply with the requirement by providing \$1.2 million in direct subsidy for off-site affordable units or by writing a \$1.2 million check to an affordable housing fund for the city. The latter two options may be appealing to the city because they could potentially generate a greater number of affordable units if built in a neighborhood with lower rents and land values. Moreover, having a program that

¹⁷ We calculate these values by discounting the future foregone revenue, assuming three percent annual rent escalation, using the unleveraged internal rate of return that we estimate such a project in these markets would generate. See the appendix to our full report for additional information.

Figure 5: Potential affordable set-aside for property tax-exempt development following a 33 percent zoning increase, by construction and market type and by level of affordability.



offers multiple means of compliance may increase the number of projects that are able to meet the requirements and be financially feasible to develop.

This type of decision, however, raises complicated trade-offs policymakers must weigh between the value of on-site affordable units versus units provided in fully affordable buildings or in mixed-income housing in neighborhoods with lower rents.

While allowing off-site options for compliance may result in a greater number of affordable units generated, there are a number of reasons why the city might prefer to have units on-site. For example, on-site affordable units ensure that low- and moderate-income tenants have access to the same neighborhood amenities as market-rate tenants of new buildings, which may include high-quality schools, public safety, and proximity to employment opportunities. Including affordable units in mixed-income buildings may also help ensure the long-term sustainability of those units, because the income from the market-rate units provides a stronger incentive for the landlord to maintain and operate the building as a whole. These goals may be harder to achieve if affordable units are in a different building, even if it is within half a mile or within the same community district.



Depth of affordability

In designing its policy, the city will need to determine the level of affordability to require. There are a number of factors that might influence this decision. But, one lesson our analysis highlights is that requiring a unit to be affordable at any level far below market has a much larger effect on a project’s financial return than the exact level of affordability it must provide. As a result, in strong and very strong market neighborhoods, requiring deeper affordability does not drastically change the amount of affordable housing that can be cross-subsidized with additional zoning density.

Figure 5 shows, for different construction and market types (all with property tax exemption), how the total share of affordable units that can be required after a 33 percent increase in zoning density changes as the level of required affordability changes. For a high-rise in our very strong market type, deepening the affordability of rent-restricted units from 60 to 40 percent of AMI would require decreasing the affordable set-aside only slightly, from 30 percent to 28 percent, in order to make up for the lost revenue. Even in our strong market type, the decrease in the set-aside for both high-rise and mid-rise development would be only three percentage points.

Length of affordability

In theory, because permanent affordability is more onerous than long-term affordability, such a requirement may mean making a trade-off with some other goal, like maximizing the number of affordable units. However, our analysis suggests that requiring permanent affordability (which is already required by the existing Inclusionary

Housing Program) would not significantly affect the development market. At the time a development project is being planned and underwritten, whether a subset of units will generate below-market rental income for 35 years or for an indefinite period is unlikely to sway the investment decisions of most developers. Not only would the present value of any such revenue differences so far in the future be small, but typical valuation methods used by developers may not take the difference into account at all. Accordingly, a policy that requires units to remain permanently affordable is unlikely to inhibit residential development.

There are, however, important concerns about the long-term financial sustainability of permanently affordable units for the city to consider, especially for off-site units. As buildings age, they may require building system replacements and other costly capital investment. If there is no ongoing cross-subsidy from market-rate units, stand-alone affordable housing may look to public subsidies instead.

Conclusion

The city faces many hard policy choices as it designs its mandatory inclusionary zoning program, many unrelated to the economic potential of additional zoning density. Our analysis does not dictate exactly how the city should make these choices, but it does highlight some of the constraints and trade-offs it faces. In many neighborhoods, including some that the city has already targeted for the new program, market rents are too low to justify new mid- and high-rise construction, so additional density would offer no immediate value to developers that could be used to cross-subsidize affordable units. In these areas, inclusionary



zoning will need to rely on direct city subsidy for the time being if it is to generate any new units at all regardless of the income level they serve.

Where high rents make additional density valuable, there is capacity to cross-subsidize new affordable units without direct subsidy, but the development of a workable inclusionary zoning policy will be complex. The amount of affordable housing the city could require without dampening the rate of new construction or relying on developers to accept lower financial returns or landowners to be willing to sell at lower prices will vary widely depending on a neighborhood's market rent, the magnitude of the upzoning, and, to a lesser extent, on the level of affordability required in the rent-restricted units. Where developers must provide the required affordable housing, and whether they can instead pay a fee directly to the city, also bears heavily on the number of affordable units a mandatory inclusionary zoning policy has the potential to generate, but raises other difficult issues.

Our analysis also highlights the importance of 421-a to the city's new inclusionary zoning policy. The availability of property tax exemption greatly increases the value of additional zoning density and its potential to cross-subsidize affordable units. If subject to the higher property tax burden than would otherwise apply, developers will require much higher rents in order to go forward with rental development, even if fully market rate.

Authors

Josiah Madar
Mark Willis

Special Thanks

Eric Stern
Jessica Yager

Acknowledgments

We gratefully acknowledge the generous support of the Ford Foundation for the research that made this policy brief possible. The statements made and views expressed in this brief, however, are solely the responsibility of the authors. We are also grateful to: Elizabeth Propp for her real estate industry expertise and her generous help developing the financial models on which our analysis so heavily depends; Jonathan Miller of Miller Samuel for providing rent data; Reis, Inc. for providing development pipeline data; the advisory boards of the Furman Center and Moelis Institute for Affordable Housing Policy, for their insight and valuable feedback on early findings and drafts of our report; and the other experts, stakeholders, and city officials we consulted to hone our models, refine our understanding of existing programs, and discuss our findings.

The NYU Furman Center advances research and debate on housing, neighborhoods, and urban policy. Established in 1995, it is a joint center of the New York University School of Law and the Wagner Graduate School of Public Service. More information about the Furman Center can be found at www.furmancenter.org.