

Economics of Inclusionary Housing Policies & Impact Fees



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A Literature Review

This list summarizes peer-reviewed studies and other academic articles from the economics and planning literature relevant to inclusionary housing policies. In general, these studies address the market effects of both impact fees and inclusionary housing policies, including their effects on housing production, housing prices, and land values.

Most Relevant Studies

Baden, Brett M. and Don L. Coursey. 1999. *An Examination of the Effects of Impact Fees on Chicago's Suburbs. Harris School Working paper 99, 20, University of Chicago, Harris Institute.*

Using sales from new and existing homes in the Chicago area, the authors find positive effects of impact fees on housing prices with impacts that are larger than the size of the fee itself.

Bento, Antonio, Scott Lowe, Gerrit-Jan Knaap, and Arnab Chakraborty. 2009. "Housing Market Effects of Inclusionary Zoning" *Cityscape*, 11.2, Regulatory Innovation and Affordable Housing 7-26.

In a study of California between 1988 and 2005, Bento, Lowe, Knaap, and Chakraborty (2009) find that inclusionary housing policies had a positive effect on the price of single-family houses, increasing prices by about 2 to 3 percent. This analysis controls for city-level characteristics that do not vary over time (e.g., a city's location or proximity to amenities) and characteristics that are uniform across cities but varying by year (e.g., a recession). This analysis does not control for unobserved characteristics that vary both by time and location.

The authors also find that cities with inclusionary housing policies did not experience a significant reduction in the rate of single-family housing starts; however, they did experience a marginally significant increase in multi-family housing starts.

Burge, Gregory S. and Keith R. Ihlanfeldt. 2006a. "Impact Fees and Single-Family Home Construction" *Journal of Urban Economics*, 60, 284-306.

Burge, Gregory S. and Keith R. Ihlanfeldt. 2006b. "The Effects of Impact Fees on Multifamily Housing Construction" *Journal of Regional Science*, 46, 5-23.

These studies find \$1.00 of impact fees will increase the price of small, medium, and large sized homes by \$0.39, \$0.82, and \$1.27, respectively. Impact fees result in housing price increases when homeowners capitalize the tax burden and infrastructure enhancements into the price of the home.

The authors also find impact fees earmarked for public services otherwise funded through property tax revenues increase construction of small homes within inner suburban areas and have a negligible impact on construction rates in central city and rural areas.



California Coalition for Rural Housing and the Non-Profit Housing Association of Northern California. 2004. "Inclusionary Housing in California: 30 Years of Innovation." *Inclusionary Zoning: The California Experience*. National Housing Conference 3 (1).

The authors examine 107 inclusionary zoning policies in California and did not find any evidence that the policies slowed development.

Delaney, Charles J. and Marc T. Smith. 1989a. "Impact Fees and the Price of New Housing: An Empirical Study." *AREUEA Journal*, 17, 41-54.

Delaney, Charles J. and Marc T. Smith, 1989b. "Pricing Implications of Development Exactions on Existing Housing Stock." *Growth and Change*, 20, 1-12.

In the above pair of studies of Dunedin, Florida in 1974, the authors find that impact fees raise the price of new homes by about three times the size of the fee.

Dresch, Marla and Steven M. Sheffrin. 1997. *Who Pays for Development Fees and Exactions. San Francisco, California: Public Policy Institute of California.*

Using data from Contra Costa, California, the authors find an additional \$1 of impact fees increases the price of new homes by \$1.88.

Evans-Cowley, Jennifer S., and Larry L. Lawhon. 2003. "The Effects of Impact Fees on the Price of Housing and Land: A Literature Review," *Journal of Planning Literature*. Vol. 17: 351-359.

Impact fees result in housing price increases when homeowners capitalize the tax burden and infrastructure enhancements into the price of the home. The authors also note that impact fees contribute to housing price increases in communities where no reasonable housing substitutes exist.

Evans-Cowley, Jennifer S., Fred A. Forgey, and Ronald C. Rutherford. 2005. "The Effect of Development Impact Fees on Land Values." *Growth and Change*, 36, 100-112.

Using data from Texas, the authors find weak statistical evidence that impact fees decrease the value of undeveloped land. They estimate a \$1,000 residential impact fee would increase the price of residential lots by 1.3 percent, but reduce the price of undeveloped land by 0.042 percent.

Ihlanfeldt, Keith R. and Timothy M. Shaughnessy. 2004. "An Empirical Investigation of the Effects of Impact Fees on Housing and Land Markets." *Regional Science and Urban Economics*. 34(6), 639-661.

With data from Dade County, Florida the authors find that \$1.00 of fees increases the price of both new and existing housing by about \$1.60. They also find that \$1.00 of fees reduces the price of land by about \$1.00.

Knapp, Gerrit-Jan, Antonio Bento and Scott Lowe. 2008. *Housing Market Impacts of Inclusionary Zoning*. College Park, MD: National Center for Smart Growth Research and Education.

Using evidence from California, the authors find that, in jurisdictions with inclusionary housing policies, housing prices increase on average by 2.2 percent. These authors also find inclusionary housing programs raise prices by about 5 percent for above-median priced houses, but for below-median price households, they lower prices by about 0.8 percent.

Mathur, Shishir, Paul Waddell, and Hilda Blanco. 2004. "The Effect of Impact Fees on the Price of New Single-Family Housing." *Urban Studies*, 41 (7), 1303-1312.

The authors estimate the differential effects of impact fees on housing prices based on housing quality. Using data from King County, Washington, they find the effect varies greatly for homes of different quality. While on average, they find \$1.00 of impact fees raises new home prices by \$1.66, for higher-quality homes the effect is \$3.58, and they find no effect for lower-quality homes.

Mayer, Christopher J. and C. Tsuriel Somerville. 2000. "Land Use Regulation and New Construction" *Journal of Urban Economics*, 48 (1), 85-109.

The authors investigate impact fees in a broader context of housing regulations. Their findings suggest that municipalities with more extensive regulations can have up to 45 percent fewer starts, but impact fees themselves have relatively little effect on new construction. Rather, they note, it is regulations that lengthen the development process or otherwise constrain new development have more significant effects on housing production.

Mukhija, Vinit, Lara Regus, Sara Slovin, and Ashok Das. 2010. "Can inclusionary zoning be an effective and efficient housing policy? Evidence from Los Angeles and Orange Counties." *Journal of Urban Affairs* 32.2, 229-252.

The authors compare 17 different municipalities with inclusionary housing policies adopted over a period of 35 years. The authors find no statistically significant evidence of inclusionary zoning's adverse effect on housing supply in cities with inclusionary mandates. The authors conclude that critics of inclusionary housing policy "overestimate its adverse effects on housing supply."

Nelson, Arthur C., Jane H. Lillydahl, James E. Frank, and James C. Nicholas. 1992. "Price Effects of Road and Other Impact Fees on Urban Land." *Transportation Research Record* 1305, 36-41.

The authors find positive effects of impact fees on the price of land, but note the effect differs dramatically across selected housing markets.



Powell, Benjamin and Edward Stringham. 2004a. "Housing Supply and Affordability: Do Affordable Housing Mandates Work?" Los Angeles: Reason Public Policy Institute, Policy Study No. 318.

Powell, Benjamin and Edward Stringham. 2004b. "Do Affordable Housing Mandates Work? Evidence from Los Angeles County and Orange County." Los Angeles: Reason Public Policy Institute, Policy Study No. 318.

Together, the two above studies offer the most robust findings that associate inclusionary housing policies with negative effects on housing production. On average, they find that, in cities with inclusionary housing policies, permits declined 10 to 30 percent in the seven years after the policies were adopted.

Rosen, David. 2004. "Inclusionary Housing and its Impacts on Housing and Land Markets." 2004. *Inclusionary Zoning: The California Experience*. National Housing Conference 3 (1).

The author analyzes building permit data to examine the effect of inclusionary housing policies on the pace of development. He finds no negative effect on overall production.

Schuetz, Jenny, Rachel Metzler, and Vicki Been. 2009. "Silver Bullet or Trojan Horse? The Effects of Inclusionary Zoning on Local Housing Markets." *Urban Studies*.

In a study of inclusionary housing, Schuetz et al. (2009) examine the impact of these policies on prices and production of market-rate housing production in Boston and San Francisco. The authors find a minor effect of inclusionary housing on housing production in Boston and no evidence in the Bay Area.

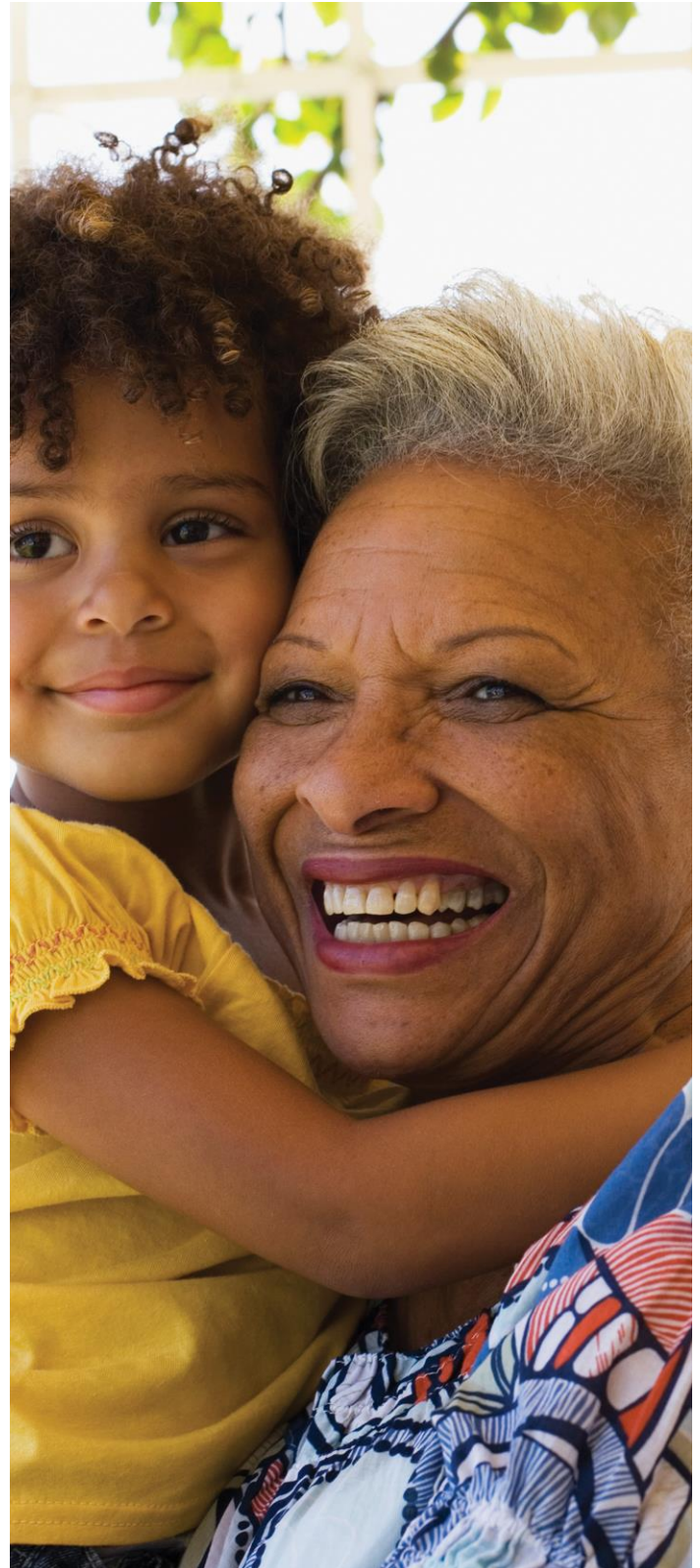
In Boston, Schuetz et al. (2009) find that a 1 percent increase in the age of a program leads to a 1.4 percent increase in the prices of single family homes. In their simplest model, they find no effect of inclusionary housing policies on prices in San Francisco, although this result is nuanced in the presence of a more sophisticated model. They also find that inclusionary housing policies led to increased prices during periods of housing appreciation, but decreases in prices in cooler markets.

Skaburskis, Andrejs and Mohammad Qadeer. 1992. "An Empirical Estimation of the Price Effects of Development Impact Fees." *Urban Studies* 5, 653-667.

Using evidence from Toronto, Canada, the authors find housing price increases attributable to impact fees were related to city growth rates. In their results, faster city growth rates are associated with a lower price effect of impact fees. They also conclude that lot prices increase by \$1.20 for each \$1.00 of impact fee.

Skidmore, Mark and Michael Peddle. 1998. "Do Development Impact Fees Reduce the Rate of Residential Development?" *Growth and Change* 29 (3), 383-400.

The authors use data from DuPage County, Illinois in the early 1990s. They conclude that impact fees reduce rates of residential development by more than 25 percent.



Additional Peer Reviewed Studies

Altshuler, Alan A. and José A. Gomez-Ibáñez. 1993. *Regulation for Revenue: The Political Economy of Land Use Exactions*. Washington D.C.: Brookings Institution and Cambridge, MA: Lincoln Institute of Land Policy.

Basolo, Victoria and Nico Calavita. 2004. "Policy Claims with Weak Evidence: A Critique of the Reason Foundation Study on Inclusionary Housing in the San Francisco Bay Area." Working paper.

Burge, Gregory. 2008. "Impact Fees in Relation to Housing Prices and Affordable Housing Supply," chapter in *A Guide to Impact Fees and Housing Affordability*. Editors A. Nelson, J. Juergensmeyer, J. Nicholas, and L. Bowles, Island Press.

Been, Vicki. 2005. "Impact Fees and Housing Affordability" *Cityscapes*, 8, 139.

Calavita, Nico and Kenneth Grimes. 2007. "Inclusionary Housing in California: The Experience of Two Decades." *Journal of the American Planning Association*, 64 (2), 150-169.

Clapp, John M. 1981. "The Impact of Inclusionary Zoning on the Location and Type of Construction Activity." *AREUEA Journal*, 9: 436-456.

Downing, Paul B. and Thomas S. McCaleb. 1987. "The Economics of Development Exactions." In *Development Exactions*, edited by James E. Frank and Robert M. Rhodes, 42-69. Washington D.C.: Planners Press.

Ellickson, Robert C. 1981. "The Irony of 'Inclusionary' Zoning." *Southern California Law Review* 54(6): 1167-1216.

Huffman, Forrest E., Arthur C. Nelson, Marc T. Smith, and Michael A. Stegman. 1988. "Who Bears the Burden of Development Impact Fees?" *Journal of the American Planning Association*, 54, 49-55.

Ihlanfeldt, Keith R. 2004. "Exclusionary Land-use Regulations within Suburban Communities: A Review of the Evidence and Policy Prescriptions." *Urban Studies*, 41(2), 261-283.

Mallach, Alan. 1984. *Inclusionary Housing Programs: Policies and Practices*. New Brunswick, NJ: Center for Urban Policy Research, Rutgers University.

Padilla, Laura. 1995. "Reflections on Inclusionary Housing and a Renewed Look at its Viability." *Hofstra Law Review* 23 (3), 539-626.

Powell, Benjamin and Edward Stringham. 2005. "The Economics of Inclusionary Zoning Reclaimed: How Effective Are Price Controls?" *Florida State University Law Review* 33 (2).

Read, Dustin. 2009. "The Structure and Potential Economic Effects of Inclusionary Zoning Ordinances." *Real Estate Issues* 34 (2), 1-9.

Singell, Larry D. and Jane H. Lillydahl. 1990. "An Empirical Examination of the Effect of Impact Fees on the Housing Market." *Land Economics* 66 (1), 82-92.

Snyder, Thomas P., Michael A. Stegman, and David H. Moreau. 1986. *Paying for Growth: Using Development Fees to Finance Infrastructure*. Washington, D.C.: Urban Land Institute.





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Economics of Inclusionary Housing Policies: Effects on Housing Prices

Question: If cities implement an inclusionary housing policy, will the price of market rate housing increase significantly?

Answer: No, the price of market rate housing will not increase significantly. The available evidence suggests the presence of an inclusionary housing policy may result in an increase in price of new market rate housing by no more than 3 percent—and likely will have no price effect at all.

Economic Theory

When adhering to an inclusionary housing requirement, developers experience an “opportunity-cost” for including below-market rate or affordable units within an otherwise market rate development. This opportunity cost is the difference between the market price the developer would have earned absent the policy and the lower price he actually receives from the affordable unit. As a result, under an inclusionary housing policy, the developer projects less revenue from the building.

In competitive housing markets, however, this cost increase does not directly lead to price increases. **That is, a single developer cannot “pass along” his increased costs to consumers.**

A developer faces competition from other developers building new housing and from the market for comparable existing housing. As a result, a single developer cannot increase his prices above the market equilibrium price. He would not be able to do this because customers will simply go elsewhere. Other developers, willing to accept smaller profits, will draw customers away from a developer who attempts to raise his price above the market equilibrium.

A developer who attempts to raise his prices above what the market will bear also faces competition from existing high-end homes and apartments. In fact, new housing makes up a very small share of the total housing in any community. Typically, fewer than 10 percent of the homes sold during a typical period are brand new. For example, of the 5.4 million homes sold in the United States in May of 2015, fewer than 500,000 were new homes.¹ As a result, if a developer raises his price on the units within his newly constructed building, house-hunters not only have options in other new buildings, they also have options in existing homes and apartments that are newly vacant.

It is a developer's job to make the maximum possible profit on any given development venture. If a developer could raise the price on their new market rate housing units, they would certainly do so—with or without the existence of an inclusionary housing requirement.

If costs increase for all developers (e.g., a tax or an increase in the price of land or construction costs) then prices may increase in certain markets where homebuyers and renters have few other choices. These special markets are marked by low vacancy rates, high levels of demand, and high desirability. They are often expensive, desirable urban areas. For instance, in unique neighborhoods in San Francisco or Manhattan, prospective upper income renters may be willing to “absorb” higher rents because they have a strong desire to live in those particular neighborhoods and no others.

In most cities in America, however, homebuyers and renters have many choices about where to live—including existing vacant homes and other nearby cities. In these places, developers who see their prices increase are not be able to pass along those costs to consumers.

As a result, an inclusionary housing policy can lead to higher prices only if consumers are willing to pay a premium to live in the location with the policy (Padilla 1995). In many cities, consumers are not willing to do so, and an inclusionary housing policy would lead to a small or zero effect on price.

Economic Evidence

While there are no high-quality academic articles on the price effects of housing development impact fees, we can reasonably infer their effects from the evidence on inclusionary housing

¹ Statistics on the sale of existing homes available from the National Association of Realtors online: <http://www.realtor.org/sites/default/files/reports/2015/embargoes/ehs-06-22/ehs-05-2015-overview-2015-06-22.pdf>. Statistics on the sales of new homes available from the U.S. Census Bureau online: <https://www.census.gov/construction/nrs/pdf/newressales.pdf>.

policies. There have been only a handful of economic studies of the price effects of inclusionary housing policies, and only three of these studies are methodologically reliable.²

These high-quality studies use a technique called “difference-in-differences,” which controls for spatial characteristics that do not vary over time (e.g., a city’s proximity to the ocean) and temporal characteristics that are uniform across geographies but vary by time (e.g., a statewide recession). As a result, these studies do not control for unobserved characteristics that vary by time and location (e.g., a recession hits one city harder than another). While these studies do use the best methodology available, this limitation can present a major problem if, for example, a city is more likely to implement an inclusionary housing policy when prices are rising relative to its peers. As a result, we can infer that **even the most carefully-designed studies likely overestimate the actual effect of inclusionary housing on market rate housing prices.**

In a study of California between 1988 and 2005, Bento, Lowe, Knaap, and Chakraborty (2009) found that housing prices in cities that adopted inclusionary housing policies increased about 2 to 3 percent faster than among cities that did not adopt such policies. They also found that inclusionary housing programs raised prices by about 5 percent for above-median priced houses, but for below-median priced houses, they lowered prices by about 0.8 percent.

One explanation for this finding is that in new buildings, which are subject to inclusionary housing requirements or housing development impact fees, developers will raise the price of their market rate units by about 5 percent to offset their costs. These price effects may pass on to the market for existing homes as individuals selling existing high-end housing will see that they can raise their prices by about 5 percent and still remain competitive. Another explanation for this finding is that supply of new housing may fall as some developers can no longer make their projects pencil in the presence of the new policy. When the supply of new housing falls and the number of people looking for new housing remains unchanged, the price of that new high-end housing would increase.

In one of the most recent studies of inclusionary housing, Schuetz et al. (2009) examine the impact of these policies on prices and production of market-rate housing in Boston and San Francisco. The primary difference between the Schuetz et al. (2009) paper and the earlier literature is that these authors use the natural log of years since the inclusionary policy was adopted to measure the presence of inclusionary housing policies. Basically, this model allows the authors to estimate an “exposure” effect of inclusionary policies—rather than calculating an

² Other studies on this topic have provided anecdotal or qualitative evidence that linked inclusionary housing requirements with price increases in certain examples. However, due to their unreliable methodologies, these studies have failed to credibly establish causality in this relationship.

average effect over a whole period, they calculate an effect based on the number of years a policy has been in place.

In Boston, Schuetz et al. (2009) find that a 1 percent increase in the age of a program leads to a 1.4 percent increase in the prices of single family homes. In their simplest model, they find no effect of inclusionary housing policies on prices in San Francisco. . . For example, in numbers, supposing a single family home sells for about \$240,000 in the absence of an inclusionary policy, that unit would sell for less than \$5,000 more in the presence of an inclusionary policy that is at least five years old. An effect of this size, in practical terms, is dwarfed by larger market trends such as inflation and appreciation.

Finally, in a study for Cornerstone Partnership, now Grounded Solutions Network, Hollingshead (2015) examines changes in inclusionary housing policies that occurred in response to the 2009 decision by the California's Second District of Appeal in *Palmer/Sixth Street Properties LP v. City of Los Angeles*, when many jurisdictions in California eliminated or weakened their inclusionary housing policies.

The study fails to find evidence that developers lowered rental prices in cities that eliminated or weakened their rental inclusionary housing policies. In short, this means that developers likely do not lower the price of high-cost units in response to a city repealing or reducing the requirements of its inclusionary housing policy.

This report does, however, find a strongly statistically significant and positive effect of weakening an inclusionary housing policy on the price of low-cost units. It finds that weakening an inclusionary housing policy is associated with a 2 percent increase in median rental prices and a 3 percent increase in the price of low-cost units.

These findings suggest that while inclusionary housing policies may not result in significant price increases for high-end units, they do contribute to keeping prices lower for working class families.

Summary

There is no doubt that cities enact inclusionary policies in response to eroding affordability (i.e., when prices are increasing). Unfortunately, even the high quality studies reviewed here cannot account for this fact. As a result of this bias, these studies likely overstate the effect of inclusionary housing policies on the price of new market rate housing.

However, the available evidence suggests inclusionary housing policies would increase the price of new market rate housing by no more than 3 percent. In many cases, especially in cities where homebuyers and renters have a great deal of choices in where to locate, these policies may not lead to any increase in price at all.

Citations

Bento, Antonio, Scott Lowe, Gerrit-Jan Knaap, and Arnab Chakraborty. 2009. "Housing Market Effects of Inclusionary Zoning" *Cityscape*, 11.2, Regulatory Innovation and Affordable Housing 7-26.

Hollingshead, Ann. 2015. "When and How Should Cities Implement Inclusionary Housing Policies?" University of California, Berkeley for the Cornerstone Partnership.

Padilla, Laura. 1995. "Reflections on Inclusionary Housing and a Renewed Look at its Viability." *Hofstra Law Review* 23 (3), 539-626.

Powell, Benjamin and Edward Stringham. 2005. "The Economics of Inclusionary Zoning Reclaimed: How Effective Are Price Controls?" *Florida State University Law Review* 33 (2).

Schuetz, Jenny, Rachel Metzler, and Vicki Been. 2009. "Silver Bullet or Trojan Horse? The Effects of Inclusionary Zoning on Local Housing Markets." *Urban Studies*.



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The Economics of Inclusionary Housing Policies: Effects on Housing Production

Question: Do inclusionary housing policies slow or stop the production of new market rate homes?

Answer: No. There is no credible evidence to suggest that inclusionary housing policies lead to a reduction in the production of new market rate housing.

Economic Theory

In the simplest economic theory, if inclusionary housing policies lead to significant cost increases for developers, then those policies could result in a reduction in housing supply. When adhering to an inclusionary housing requirement, developers experience an “opportunity-cost” for including below-market rate or affordable units within an otherwise market rate development. This opportunity cost is the difference between the market price the developer would have earned absent the policy and the lower price he actually receives from the affordable unit. As a result, under an inclusionary housing policy, the developer projects less revenue from the building. This has the same effect on his bottom line as an increase in construction costs or the payment of a fee.

As a result, developers could reduce supply either because the same developers build fewer units (perhaps now they only build in the most profitable parts of town) or because only certain types of developers are willing to build at all. A “marginal” developer—or a developer whose project just barely pencils out without an inclusionary housing policy—may see his costs increase with the policy, which causes him to rethink the project.

In reality, however, inclusionary housing policies are not so restrictive. Profit-sensitive developers are often able to find creative ways to cut costs or, in some cases, temporarily adjust their profitability. For example, developers who do not own land at the time of the policy's enactment can bargain with the landowner for a lower land price. In fact, most economists believe that, in the long run, the cost burden of an inclusionary housing policy is capitalized into decreased values of residential land (Calavita and Grimes 2007). If developers do already own land, they may still have some flexibility to adjust other construction costs for instance, building slightly smaller units or using less costly internal finishes. They can also choose to adjust profitability in the short-run, and put up with a slimmer profit margin, and then resume their normal profit level for future projects when they can bargain with landowners.

Most inclusionary housing policies are also highly flexible and offer cost offsets, such as density bonuses, reduced parking requirements, tax abatements, fee waivers, or fast-track processing. These cost offsets allow developers to maintain their profitability.

In fact, inclusionary policies may even promote more market-rate development in cities with very constrained housing markets (e.g., strict density requirements and other forms of exclusionary zoning). In these cases, a flexible inclusionary policy that allows inclusionary buildings to receive conditional use permits or variances from strict zoning code requirements create opportunities for developers to build more efficiently and creatively. As a result, these policies may lead to more development.

Economic Evidence

The highest quality study on the effect of inclusionary housing policies on housing production comes from Schuetz et al. (2009), who examine the impact of these policies on prices and production of market-rate housing production in Boston and San Francisco. These authors use a “difference-in-differences” approach, which controls for spatial characteristics that do not vary over time (e.g., a city's proximity to the ocean) and characteristics that are uniform across geographies but vary by time (e.g., a statewide recession).

Schuetz et al. (2009) found a trivial effect of inclusionary housing on housing production in Boston. They find that a 1 percent increase in the time since the policy was adopted is associated with a decrease in production of about 0.6 percent. That is, a six month increase in the age of policy is associated with a reduction of just two housing permits per year. They find no evidence that inclusionary housing policies lead to reductions in housing production in the Bay Area.

In the study of Californian cities between 1988 and 2005, Bento et al. (2009) also use a similar sophisticated difference-in-differences approach. The authors found that inclusionary housing policies have no significant effect on the number of permits for single-family housing units. However, they do find that single-family permits as a share of total permits are lower in jurisdictions with inclusionary housing policies. This was the result of a marginally significant increase in multi-family housing where inclusionary housing policies are applied. This could be because those inclusionary housing ordinances included density bonus incentives and thus created the opportunity for *more* housing developments of higher density multifamily types of buildings.

Using data from Los Angeles and Orange Counties, Mukhija et al. (2010) compare seventeen different municipalities with inclusionary housing policies adopted over a period of 35 years. They control for some observed characteristics, like a city's unemployment rate as a proxy for housing market strength. Unlike the higher-quality Schuetz et al. (2009) paper, they do not control for unobserved geographic and temporal characteristics, like a city's proximity to amenities or a statewide recession. Mukhija et al. (2010) find no statistically significant evidence of inclusionary zoning's adverse effect on housing supply in cities with inclusionary mandates.

There have also been a few descriptive studies that do not find an association between inclusionary housing policies and decreases in housing production. In a study of 28 Californian cities over a 20-year period, Rosen (2004) examined building permit data to test the association between inclusionary housing policies and the pace of development. He found no negative association. In some cases, housing production increased after the passage of an inclusionary housing policy. The California Coalition for Rural Housing and the Non-Profit Housing Association of Northern California (2004) also examined 107 inclusionary zoning policies in California and did not find any evidence that the policies were associated with slower rates of development.

However, there has been one descriptive study that found an association between inclusionary housing and a decrease in housing production. In a study of cities in southern California, Powell and Stringham (2004) found that cities with inclusionary housing policies experienced a decline in housing permits of 10 to 30 percent in the seven years after the policies were adopted. Like the studies by Rosen (2004) and the California Coalition for Rural Housing and the Non-Profit Housing Association of Northern California (2004), this study should be interpreted as descriptive, and not causal.

Summary

There is no credible evidence to suggest that inclusionary housing policies lead to lower rates of housing production. This is likely because developers are able to adapt to flexible inclusionary housing policies by bargaining over land prices and adjusting their profits in the short run.

Citations

Bento, Antonio, Scott Lowe, Gerrit-Jan Knaap, and Arnab Chakraborty. 2009. "Housing Market Effects of Inclusionary Zoning" *Cityscape*, 11.2, Regulatory Innovation and Affordable Housing 7-26.

Calavita, Nico and Kenneth Grimes. 2007. "Inclusionary Housing in California: The Experience of Two Decades." *Journal of the American Planning Association*, 64 (2), 150-169.

California Coalition for Rural Housing and the Non-Profit Housing Association of Northern California. 2004. "Inclusionary Housing in California: 30 Years of Innovation." *Inclusionary Zoning: The California Experience*. National Housing Conference 3 (1).

Mukhija, Vinit, Lara Regus, Sara Slovin, and Ashok Das. 2010. "Can inclusionary zoning be an effective and efficient housing policy? Evidence from Los Angeles and Orange Counties." *Journal of Urban Affairs* 32.2, 229-252.

Rosen, David. 2004. "Inclusionary Housing and its Impacts on Housing and Land Markets." 2004. *Inclusionary Zoning: The California Experience*. National Housing Conference 3 (1).

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