

Economics of Inclusionary Housing Policies & Impact Fees



A Literature Review

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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.

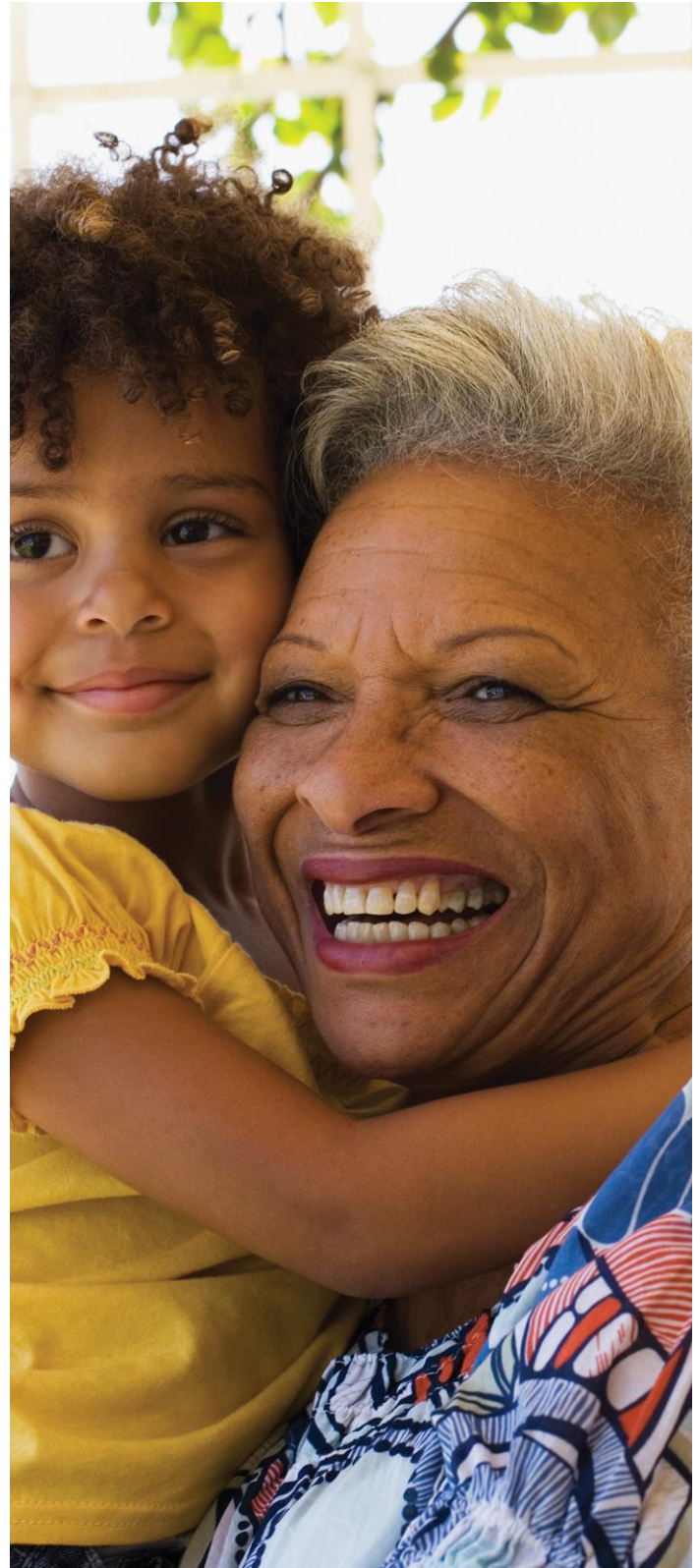
In Boston, Schuetz et al. (2009) find that a 1 percent increase in the age of a program leads to a 1.4 percent increase in the prices of single family homes. In their simplest model, they find no effect of inclusionary housing policies on prices in San Francisco, although this result is nuanced in the 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" *Citiescapes*, 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.

