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A Review of the Literature

CENTER FOR HOUSING POLICY

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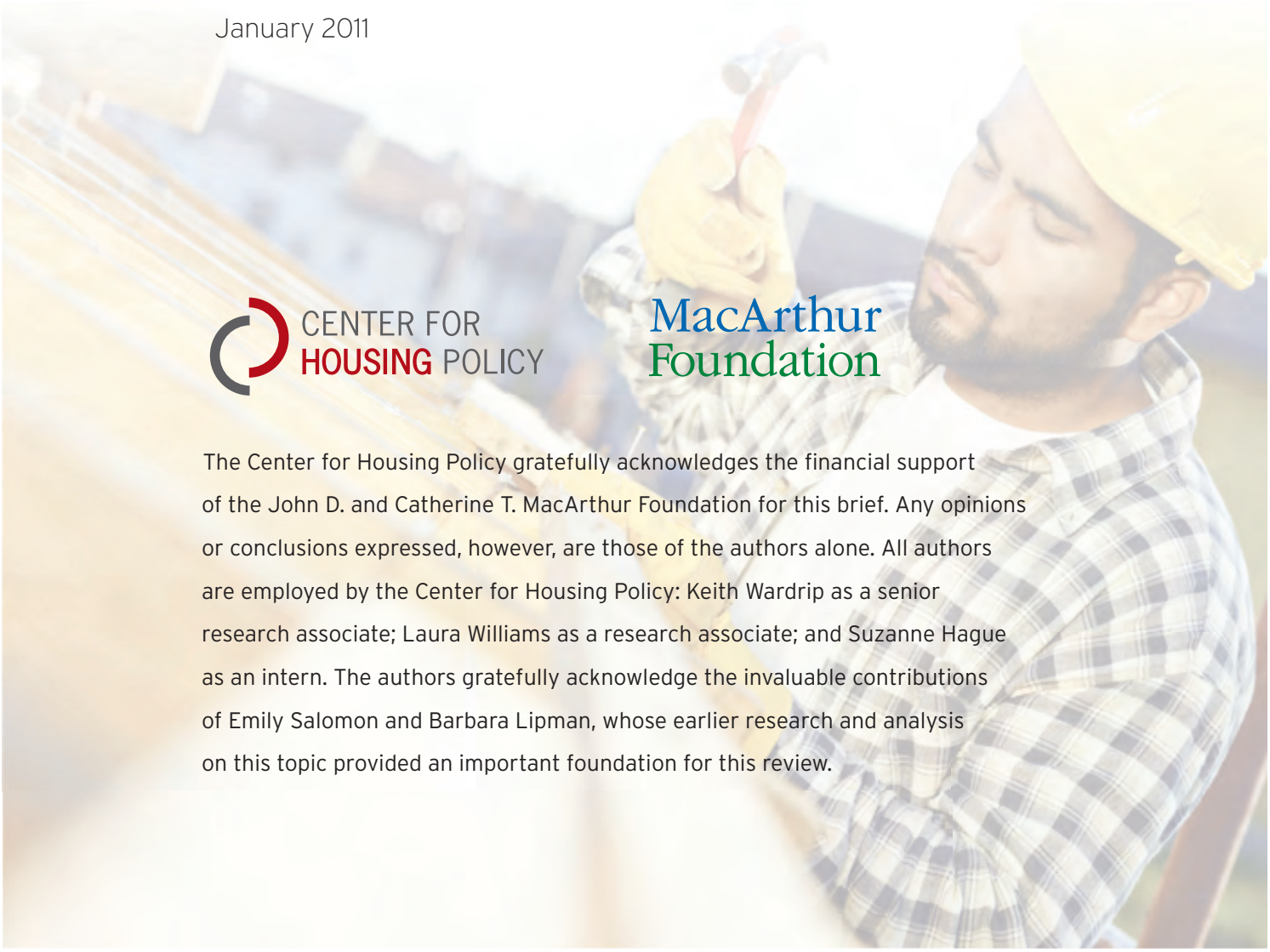

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Exploring the Intersection of Affordable Housing and Local Economic Development

Households with modest means need safe, suitable housing that they can afford. When housing is affordable, low- and moderate-income families are able to put nutritious food on the table, receive necessary medical care, and provide reliable daycare for their children. Research has shown that the stability of an affordable mortgage or rent can have profound effects on childhood development and school performance (Lubell and Brennan 2007) and can improve health outcomes for families and individuals (Lubell, Crain, and Cohen 2007).

But the benefits of affordable housing extend beyond its occupants to the community at large. The research reviewed in this brief demonstrates that the development of affordable housing increases spending and employment in the surrounding economy, acts as an important source of revenue for local governments, and reduces the likelihood of foreclosure and its associated costs. Without a sufficient supply of affordable housing, employers — and entire regional economies — can be at a competitive disadvantage because of their subsequent difficulty attracting and retaining workers. In addition to these proven linkages between affordable housing and economic development, this review also discusses several promising hypotheses that have not yet been as well researched but that nonetheless suggest ways in which affordable housing can foster local economic growth.[1]

AFFORDABLE HOUSING takes many different forms, and this review uses the term broadly to encompass all housing developed at levels affordable to low- and moderate-income households. Most of the programs (e.g., the Low-Income Housing Tax Credit Program, down payment assistance programs, community land trusts, public housing, etc.) use a subsidy to bring housing costs down to below market rates and in-line with what low- and moderate-income households can afford. However, this review also considers the impacts of programs and policies that reduce housing-related expenses (such as energy and transportation costs) or that provide sound, unsubsidized mortgage products to low- and moderate-income households.

[1] This brief defines "local economic development" as growth in local consumer activity, employment opportunities, and private-market investment. Also included in this brief are affordable housing's fiscal effects (i.e., the impacts on a municipality's tax base) that can be directly linked to the development or long-term presence of affordable housing. Although significant, this brief does not investigate benefits to those living in the affordable housing itself, even those that are economic in nature, because the focus of this paper is on demonstrating the communitywide impacts of this important asset.

Photo by Jackson Smith, courtesy of NHT/Enterprise Preservation Corporation

1. The Initial Development of Affordable Housing Creates Both Immediate and Long-Term Employment Opportunities and Spending in the Local Economy

SUMMARY: *As with market-rate housing, research consistently shows that developing affordable housing creates jobs – both during construction and through new consumer spending after the homes have been occupied. The impacts of building certain kinds of affordable rental housing are on par with the impacts of comparable market-rate units.*

Modeling economic activity and employment: Researchers, practitioners, and housing advocates have a variety of widely used "input/output" models with which to estimate the employment effects of building affordable housing.[2] Using "inputs" such as information on the purchase and production of goods and services for hundreds of U.S. industry sectors, the type and number of business establishments in a local economy, and a measure of direct spending for a given program, the models "output" the level of economic activity expected to result from the investment. In measuring economic activity, these models include not only the direct spending associated with the housing construction or rehabilitation itself, but also spending by suppliers (indirect effects) and the spending of wages in the local economy by those employed directly and indirectly (induced effects).[3] In addition to the total economic activity, the models also estimate the number of new local jobs supported by the activity, the wages paid by the new jobs, and the taxes that can be expected to flow to various levels of government.

Research based on these economic and employment models: Using the same model that hundreds of local jurisdictions have used to quantify housing construction impacts within their borders, a report published by the National Association of Home Builders (2010) demonstrates the impact of building 100-unit Low-Income Housing Tax Credit (LIHTC) developments for families and seniors in a typical metropolitan area using national averages as model inputs (e.g., market values, land costs, taxes, fees). The National Association of Home Builders estimates that building 100 new LIHTC units for families leads to the creation of 80 jobs from the direct and indirect effects of construction and 42 jobs supported by the induced effects of the spending. For the senior development, where units are typically smaller, slightly fewer jobs are created (see Table 1).

DIRECT, INDIRECT, AND INDUCED EFFECTS OF HOUSING CONSTRUCTION

During the construction of affordable housing – or any kind of housing, for that matter – the local economy benefits directly from the funds spent on materials, labor, and the like. If the builder is purchasing windows and doors from a local supplier, the supplier may have to spend money on materials and hire additional help to complete the order – examples of indirect effects. Finally, the construction workers, glass cutters, and landscapers are likely to spend a portion of their wages at the local grocery store or shopping mall, which illustrates induced effects. Taken together, the indirect and induced impacts of housing construction on the local economy are often called "ripple" or "multiplier" effects. These effects are maximized in localities where construction-related suppliers and other business establishments are prevalent. In localities with little industry, retail, or services, job creation still occurs but it is more dispersed because the indirect and induced spending "leaks" to other jurisdictions.

[2] The most common are the Impact Analysis for Planning (IMPLAN) model, the Regional Input-Output Modeling System (RIMS II), and the proprietary model developed by the National Association of Home Builders.

[3] Total economic output captures direct, indirect, and induced activity and is measured as the cost of materials and the value added to those materials (i.e., wages paid to laborers, profits, interest, and indirect business taxes). For a detailed discussion of outputs specific to the IMPLAN model, see Hangen and Northrup (2010). Total economic output can also be thought of as the gross sales resulting from the initial capital outlay, including the outlay itself (Minnesota Housing Finance Agency 2009).

In addition to these "real-time" jobs and economic activity, building 100 LIHTC family units also leads to the long-term creation of 30 new jobs that support the ongoing consumer activity of these homes' new residents. For 100 senior units, an estimated 32 jobs are created in response to new consumer demand.[4] For both developments, the National Association of Home Builders estimates that new residents would generate earnings for local business owners and employees in excess of $2 million annually. Table 1 summarizes the job creation potential of these LIHTC projects and shows that their effect on the labor force is comparable to that of a similarly sized market-rate property.

TABLE 1. Number of Jobs Created During and After the Construction of a 100-Unit Multifamily Property

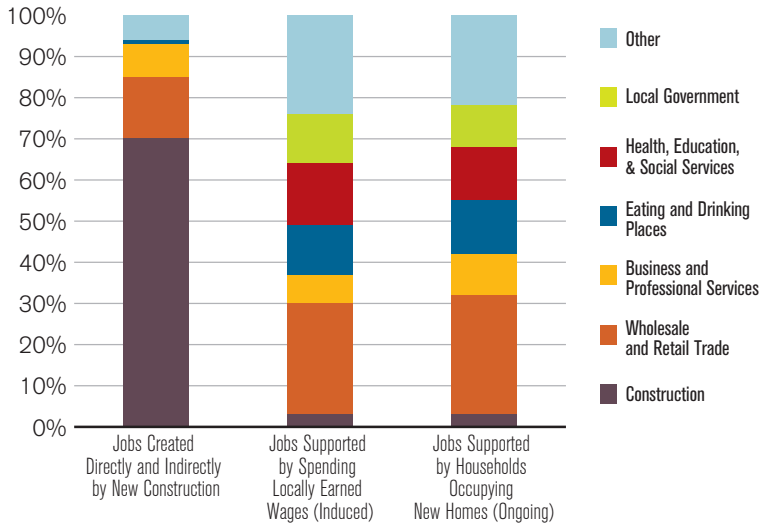
	Family LIHTC	Senior LIHTC	Market-Rate Apartments
Jobs Created Directly and Indirectly by New Construction	80	75	80
Jobs Supported by Spending Locally Earned Wages (Induced)	42	39	42
Jobs Supported by Households Occupying New Homes (Ongoing)	30	32	32

Source: National Association of Home Builders, 2010 and 2009a

As Figure 1 illustrates, the types of jobs created directly and indirectly from the construction of a LIHTC property vary considerably from those supported by the increased buying power of those involved in the construction (induced effects) and the demand for goods and services of the households that occupy the new homes (ongoing effects). Not surprisingly, jobs resulting from the direct and indirect effects are predominantly in construction, whereas induced and ongoing economic activities increase employment in wholesale/retail trade, health and education, and eating and drinking establishments.

[4] Despite the lower incomes of the older residents, the ongoing employment impacts for the senior LIHTC building exceed those for a family LIHTC property, and are identical to estimates developed for a market-rate multifamily property, because older adults are more likely to spend their income locally, particularly when Medicare payments for health services are taken into account (National Association of Home Builders 2010, 2009a).

FIGURE 1. Types of Jobs Created During and After the Construction of a 100-Unit Family LIHTC Property



Source: National Association of Home Builders, 2010

The National Association of Home Builders studies presented thus far effectively illustrate how the development of affordable housing can affect a local economy, but because they are national in scope, they do not apply to any particular region. Following are examples of the different ways in which researchers have used similar economic models to demonstrate the benefits of affordable housing construction to specific localities:

- Using a model to evaluate housing bond expenditures in Rhode Island, Hangen and Northrup (2010) estimate that $25 million in bonds catalyzed more than $200 million in construction related-expenditures and led to the development of 582 affordable rental and owner-occupied homes in fiscal years 2007 and 2008. Including indirect and induced effects, these housing bonds helped generate almost $400 million in economic activity in the state. This economic activity included $149 million of wages paid to the employees filling the 3,060 jobs created or sustained by this investment in affordable housing.
- A study conducted by the Minnesota Housing Finance Agency (2009) shows that the $260.6 million invested in affordable housing construction, rehabilitation, and rental assistance

Econsult (2009) estimates that for every dollar spent by a proposed Pennsylvania state housing trust fund on remodeling or rehabilitating an existing home, an additional $1.28 of indirect and induced spending would occur.

over a two-year period (May 2006-May 2008) leveraged an additional $471.1 million in public and private funds for this same activity. In total, the $731.7 million in direct spending generated an additional $0.91 on the dollar in indirect and induced spending, for a total of nearly $1.4 billion in total economic activity. This level of economic activity supported nearly 10,700 jobs in Minnesota over the two-year period.

- Econsult (2009) estimates that for every dollar spent by a proposed Pennsylvania state housing trust fund on remodeling or rehabilitating an existing home, an additional $1.28 of indirect and induced spending would occur. The multiplier effects for multifamily ($0.69) and single-family ($0.62) construction are lower but still substantial.[5] In terms of its impact on employment, anywhere from 14 to 20 jobs would be created for every $1 million in housing trust fund dollars spent in the state.

- Zielenbach, Voith, and Mariano (2010) analyze the one-time economic impact of nine HOPE VI[6] sites across the country. In total, the direct, indirect, and induced economic activity at the nine sites ranged from $29.9 million in Kansas City to $246.6 million in Seattle. A share of this economic activity takes the form of wages for local workers, and the authors estimate that the number of new jobs supported during redevelopment ranged from 76 (Kansas City) to 786 (Seattle) for the nine projects.[7]

- Research into the economic benefits of public housing in 10 large metropolitan areas finds that for every dollar of direct federal spending on capital and maintenance, an additional $1.12 in indirect and induced expenditures is generated by suppliers, vendors, and wage-earners. On average, these expenditures support 244 jobs in each metro area (Econsult 2007).

A number of studies have also examined the economic impacts of the expenditures dedicated to operating — as opposed to building and maintaining — subsidized housing developments once they are constructed. For example, in addition to its findings related to capital expenditures, Econsult (2007) estimates that every dollar of public housing operating expenditures generates an additional $0.93 of economic activity in the local market, and ongoing public housing operations support an average of 1,187 jobs in each metro studied. Wood (2004) investigates the economic and employment effects of non-construction federal and state housing subsidies in Utah by classifying as income the $61.4 million paid by the United States Department of Housing and Urban Development (HUD) (in the form of voucher assistance and operating and capital funds) to landlords and other housing providers in 2003. Wood estimates that this spending translates into $17.2 million in direct, indirect, and induced wages in the Utah economy and supports 1,100 jobs. Similarly, the author counts the state's $6.2 million in down payment assistance as income to recipient households, which, when spent in Utah, translates into roughly $2.4 million in earnings and 95 jobs in the state's economy.

[5] The multiplier for remodeling/rehabilitation is higher than for new construction activities because in the former, a greater share of total funds is spent on local labor, whereas in the latter, more funds are spent on materials often produced outside of the jurisdiction. In other words, funds are more likely to "leak" to other communities when they are spent on new construction than when they are spent on rehabilitation.

[6] HOPE VI is a federal program that funds the revitalization of distressed public housing.

[7] Zielenbach, Voith, and Mariano (2010) also compare the ongoing economic impact of operating the redeveloped subsidized units with the estimated impact of operating the public housing before the HOPE VI redevelopment. In cases where ongoing federal costs to operate the HOPE VI project were lower than before the redevelopment, the ongoing economic impact of the redevelopment process is slightly negative.

Hill Street Studios/Getty Images

Another study takes a different approach altogether. Rather than focusing on the impact of capital or operating expenditures on a local economy, a study of workforce housing demand in Minneapolis and St. Paul focuses on the economic impact that working families could have on the region if affordable housing were available for them to buy or rent (Maxfield Research Inc. and GVA Marquette Advisors 2001). The authors begin by estimating that the region needs to add 5,000 units to meet its pent-up demand for workforce housing, and that if it built these units, it would create residential opportunities for working households who cannot currently afford to move to the region. By making some very basic assumptions about the number of workers in each household, the income that each worker would earn for local employers, and how much each would spend in the local economy, the authors estimate that by not providing affordable housing for these potential households, the region misses out on $128 million in consumer spending, and local businesses forego $137 million in income annually because positions go unfilled.

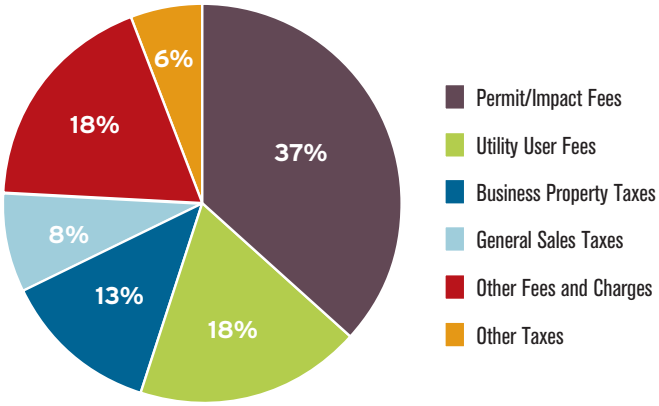
2. The Development and Rehabilitation of Affordable Housing Provides Immediate Fiscal Benefits for States and Localities

SUMMARY: *Cities and states benefit financially from the development or substantial rehabilitation of affordable housing. Some of the most significant sources of revenue during the construction or rehabilitation phase are sales taxes on building materials, corporate taxes on builders' profits, income taxes on construction workers, and fees for zoning, inspections, and the like.*

Modeling one-time fiscal benefits: The fiscal effects of the construction of affordable housing vary from place to place depending on local tax structures, construction costs, development fees, and whether the local mix of industries is conducive to capturing construction-related activity. As with the economic impact estimates discussed above, the fiscal effects discussed in this section are largely derived from one of the input/output models, which are based on actual, industry-specific purchasing and production activities and adjusted to account for local variations.

The National Association of Home Builders (2010) uses national averages to estimate that local jurisdictions stand to gain roughly $827,000 in immediate revenue from the construction of 100 LIHTC family units and roughly $768,000 when 100 LIHTC senior units are built.[8] As Figure 2 shows, permitting/impact fees and utility user fees represent more than half of all local government revenues associated with the construction of a 100-unit LIHTC property for families.[9] These estimates provide an important national baseline for the country's most prolific affordable housing production program but, given local economic and project nuances, cannot be directly applied to any specific housing market or project.

FIGURE 2. One-Time Sources of Local Revenues for a 100-Unit Family LIHTC Property



Source: National Association of Home Builders, 2010

The input/output models discussed above have also been applied by researchers to produce more localized information on the fiscal effects of specific affordable housing programs and developments. The following are examples:

- Hangen and Northrup (2010) analyze the effects of developing and rehabilitating 582 affordable homes in Rhode Island in 2007 and 2008 using

[8] The one-time fiscal effect of a 100-unit family tax credit property is identical to that of a market-rate development; tax revenues for a senior property are modestly lower because units are smaller and are thus less expensive to build (National Association of Home Builders 2010, 2009a).

[9] The breakdown of government revenues by the type of taxes and fees is very similar for a 100-unit LIHTC property for seniors (National Association of Home Builders 2010).

$25 million in housing bond funds and conclude that the activity had a significant impact on the income, corporate, and sales taxes collected by the state. The authors estimate that the $25 million in state funding leveraged an additional $231 million in investments, and the subsequent income, corporate, and sales taxes and fees associated with the total economic activity increased state revenues by roughly $16.7 million during the development period (excluding local taxes and fees).[10]

- A study conducted by the Minnesota Housing Finance Agency (2009) provides further evidence that a public investment in affordable housing can leverage significant capital and generate real revenue for state and local governments. Over two years (2006-08), an investment of $260.1 million in affordable housing leveraged roughly $470 million in additional public and private funds and resulted in nearly $1.4 billion in direct, indirect, and induced economic activity. This level of activity generated roughly $62.5 million in state and local tax revenue.

- In an analysis of a proposed Pennsylvania state housing trust fund, Econsult (2009) focuses on state-level impacts and finds that for every $1 million in proposed spending, the state stands to gain $82,000 in revenue from the construction of new affordable single-family homes; one-time state revenues would be even higher if the $1 million were spent on the construction of affordable multifamily housing ($86,000) or on remodeling or rehabilitating existing homes ($116,000). These estimates exclude taxes and fees that local jurisdictions may impose. Making these estimates even more conservative, they do not include the impact of the construction spending generated by any public or private funds that would be leveraged by housing trust fund dollars.

- Zielenbach et al. (2010) conduct a fiscal analysis of nine HOPE VI projects and find that the development of affordable housing can represent a significant source of revenue for

[10] This includes $4.1 million in sales taxes, which some nonprofit developers report paying in Rhode Island according to a recent newsletter from HousingWorks Rhode Island, the study's sponsor.

BigStockPhoto

Over two years (2006-08), an investment of $260.1 million in affordable housing leveraged roughly $470 million in additional public and private funds and resulted in nearly $1.4 billion in direct, indirect, and induced economic activity. This level of activity generated roughly $62.5 million in state and local tax revenue.

local jurisdictions. One-time fiscal impacts based solely on sales taxes related to the redevelopment activity (and income taxes in the District of Columbia) range from $38,000 for a 120-unit property to $612,000 for a project with more than 700 units.[11] While substantial, these estimates are significantly lower than those reported for tax credit properties above because they exclude fees collected by jurisdictions (e.g., impact and permit fees), corporate taxes on builders, and revenues related to indirect and induced spending.

- Wood (2004) provides a straightforward calculation of one-time fiscal benefits for states and localities in Utah. The author estimates that more than 7,300 jobs — and $200.1 million in subsequent earnings — are supported annually by housing construction subsidies, rental subsidies to landlords, and down payment assistance provided to low- and moderate-income households. Applying the average state and local tax rate of 10.2 percent to these estimated earnings, Wood pegs the resulting fiscal impact at $20.4 million, which is likely conservative because it ignores other sources of state revenue such as sales taxes on construction materials and corporate taxes on builders' profits.

In addition to these one-time benefits, the development of affordable housing can have positive fiscal effects for localities in a variety of other ways. Depending on the taxes paid and services received by a household living in a new unit, affordable housing can also have a positive annual ongoing impact on a municipality's bottom line. This issue is reviewed below, as one of several hypotheses that are supported by preliminary research but require additional investigation to refine and confirm. In addition, in certain circumstances, affordable housing construction can increase the value of, and thus the property taxes collected from, surrounding properties. The evidence for this hypothesis is reviewed below.

[11] Ongoing fiscal benefits exceed $1 million in four of the nine sites, but as they are primarily dependent on the higher incomes and significantly higher property values characteristic of HOPE VI redevelopments compared to the public housing they replaced, they are not reported here. This brief focuses on the benefits of the housing investment itself and not on the benefits that accrue as a result of displacement or resident turnover.

3. Homebuyers Who Participate in Affordable Homeownership Programs Are Less Likely to Experience Foreclosure Than Buyers Who Do Not Participate in Such Programs, Thereby Reducing Sometimes Significant Foreclosure-Related Costs for Municipalities

SUMMARY: *Multiple studies demonstrate that low- and moderate-income homeowners who purchase homes they can afford have a lower likelihood of mortgage delinquency and foreclosure than market-rate borrowers with subprime — and even prime — mortgage products. Given the substantial costs that local governments incur for each foreclosure, programs — whether subsidized or unsubsidized – that create opportunities for sustainable homeownership represent a smart, fiscally sound mechanism for promoting housing stability.*

The reduced foreclosure risk of affordable and sustainable homeownership programs: Research into the housing market downturn has consistently demonstrated the high rate of foreclosure associated with subprime loans made during the housing boom in the early 2000s (HUD 2010; Immergluck 2008; Kaplan and Sommers 2009; Immergluck and Smith 2006a). By contrast, low- and moderate-income borrowers participating in both subsidized and unsubsidized programs designed to help them

A national survey finds that homeowners in community land trusts are eight times less likely to be in the process of foreclosure than owners of market-rate homes.

succeed over the long-term are substantially less likely than similar *subprime* borrowers to experience problems with their mortgages.

- Ding et al. (2010) find that among low- and moderate-income borrowers with similar profiles, subprime borrowers were three to five times more likely to default on their mortgage than those who received prime loans through an affordable lending program that provided sound mortgage products with more flexible lending standards.[12]

- A 2007 study finds that the default rate among participants in the Dallas (TX) Mortgage Assistance Program, which provides zero-interest second loans for down payment assistance and closing costs, was only 4.8 percent, compared to the 9.6 percent average for conventional subprime loans (Federal Reserve Bank of Dallas 2007).

Some studies have found that purchasers of affordable homes participating in a variety of programs are less likely to experience defaults or foreclosure than prime borrowers or average borrowers more generally. For instance:

- A 2009 study of city-based affordable homeownership programs in Boston, Chicago, Los Angeles, New York, and San Francisco finds that all five programs have default rates below the average for their city, and that out of nearly 9,000 low-income families served by all the programs combined, the overall default rate was below 1 percent (Reid 2009).[13]

- New York City has partnered with nonprofit organizations to build or rehabilitate homes at prices affordable to low- and moderate-income households. Of the 20,614 such homes sold between 2004 and March 2010, only 13 have completed the foreclosure process (Powell 2010) – a rate of only 0.063 percent.

- The SoftSecond Loan Program in Massachusetts has provided soft second mortgage loans[14] to more than 13,700 low- and moderate-income borrowers. In the third quarter of 2009, only 0.75 percent of SoftSecond borrowers were in the process of foreclosure, compared to 1.39 percent of prime, fixed-rate loans in Massachusetts (Campen 2010), and the delinquency rate among SoftSecond borrowers was 5.7 percent, as compared to 9.3 percent for all mortgages in Massachusetts (Massachusetts Community and Banking Council).

- A national survey finds that homeowners in community land trusts[15] are eight times less likely to be in the process of foreclosure than owners of market-rate homes (0.56 percent compared to 4.58 percent at the close of 2009) (Thaden 2010).

One modest exception in the literature is the case of the Dallas Mortgage Assistance Program, whose participants had a default rate slightly higher than the state as a whole (4.8 percent compared with 4 percent) between 1997 and 2005. However, the default rate of participants in this mortgage assistance program was 3.6 percent *lower* than the average for all FHA loans over the same period (Federal Reserve Bank of Dallas 2007), which may be a more representative comparison group.

[12] The Community Advantage Program helps participating lenders comply with the Community Reinvestment Act by providing an opportunity to make loans in low- and moderate-income neighborhoods and to low- and moderate-income borrowers. Through this program, lenders can preserve the option of selling their loans on the secondary market through a nonprofit intermediary, even after loosening credit standards or requiring less cash at closing for loans with prime characteristics (e.g., fixed interest rates, no prepayment penalties, etc.).

[13] The programs in each city vary in terms of the assistance available and populations served. Although Reid (2009) does not elaborate on the specifics, at least a few programs include zero-interest deferred loans for down payment and closing cost assistance.

[14] A soft second mortgage is a second, smaller mortgage loan in addition to a first mortgage that helps to reduce a borrower's down payment and is typically low-interest and/or forgivable over a defined period of time.

[15] A community land trust is a form of shared-equity homeownership in which homebuyers own their unit, but a nonprofit land trust owns the land and restricts the resale price in order to promote long-term affordability.

Role of underwriting and education: In addition to the more affordable monthly payments of loans obtained through affordable homeownership programs, the literature suggests two explanations for the better performance of affordable mortgages as compared to *subprime* loans, though neither has been tested in a controlled study. These include the fact that affordable homeownership programs tend to utilize stronger underwriting standards than subprime loans, and that they generally offer fair, non-predatory loan terms (Holtzman 2009; Reid 2009) — as compared to the predatory practices of many (though not all) subprime lenders. As Reid asserts:

> "In direct contrast to the lax underwriting standards that were prevalent during the subprime boom…affordable homeownership programs document participants' incomes, ensure that the household is able to make the monthly payments, and provide safe and straightforward loan products that build, rather than strip, equity" (2009: 29).

For instance, the study of the Dallas Mortgage Assistance Program demonstrates that only 0.2 percent of borrowers had severe housing cost burdens,[16] suggesting that the program's underwriting process prevents applicants from borrowing more than they can afford (Federal Reserve Bank of Dallas 2007).

Additionally, all of the affordable homeownership programs mentioned above require participants to complete some form of homeowner or financial education, which has been shown to reduce foreclosure risk significantly (Mayer et al. 2009; Quercia and Cowan 2008; Hartarska, Gonzalez-Vega, and Dobos 2002; Hirad and Zorn 2001).

Municipal costs of foreclosure: The lower incidence of foreclosure among affordable homes, in turn, represents significant direct and indirect cost savings for municipalities in avoiding potential foreclosures. Direct municipal costs of foreclosure stem from a number of sources, including: foregone property taxes, utility revenues, and other taxes and fees; property maintenance such as boarding and trash removal; record-keeping; court and legal expenses; and demolition at public expense (Apgar and Duda 2005).

Chestnut Gardens, Massachusetts Housing Investment Corporation, Courtesy of MB Properties

Apgar and Duda (2005) identify 26 separate direct (i.e., quantifiable) costs incurred by municipalities for the provision of "foreclosure related services" and examine the municipal cost of five foreclosure scenarios. They find that the cost of foreclosure is minimal under the best-case scenario (a foreclosed property is never vacant and is sold at auction). However, the middle case (involving vacancy, criminal activity, and demolition) could cost a municipality more than $13,000 per property. Costs rise to more than $19,000 in "walkaway" cases, in which the owner abandons the property and the bank does not officially foreclose, and can reach $34,000 in the event that criminal activity at a walkaway results in a fire before the home is demolished (Apgar and Duda 2005).

In addition to the aforementioned costs, foreclosures also "exert downward pressure on home prices, further exacerbating problems in the housing market and the broader economy" (HUD 2010: xi). As an example, Immergluck and Smith (2006b) indicate that one home foreclosure lowers the price of nearby single-family homes by, on average, 0.9 percent; that the downward pressure on housing prices extend to houses that sell within two years of the foreclosure; and that this negative impact is cumulative, such that each additional foreclosure on the block lowers values

[16] Households are said to have a severe housing cost burden when monthly housing costs account for more than half of monthly household income.

an additional 0.9 percent. Such declines in property value have the power to seriously impact property tax revenues that local governments can collect to provide essential services to their residents. In Cuyahoga County, Ohio, for instance, a single percentage point drop in home values means an estimated $1 million loss in city revenue and a $300,000 loss in school district revenue (Living Cities 2010).

Depressed property values, and subsequently depressed property taxes, are not the only way that foreclosures can erode a locality's economy and tax base. Neighborhoods with high levels of foreclosure may require additional police protection to combat higher crime rates (Bess 2008; Immergluck and Smith 2006a; Spelman 1993), and affected households may require higher levels of social services such as food stamps (Henry J. Kaiser Family Foundation 2010) and homeless services (Colvin 2008; Wardrip and Pelletiere 2008). As long as federal, state, and local programs provide a safe, lower-risk avenue to homeownership for low- and moderate-income households, the direct and indirect cost savings to local governments should not go unnoticed.

4. Affordable Housing Can Affect an Employer's Ability to Attract and Retain Employees and Can Thus Have Implications for Regional Economic Competitiveness

SUMMARY: *In surveys, many representatives of the business community report that a lack of affordable housing makes it more difficult to recruit and retain employees. Surveys also indicate that the business community recognizes the importance of affordable housing when making location decisions, and demographic trends suggest that given the alternative, mobile individuals will abandon areas with the highest housing costs for opportunity-rich regions with lower housing costs. In addition, to the extent that an affordable housing shortage forces workers to "drive 'til they qualify," a region may be faced with congested roads, which can reduce economic competitiveness.*

Affordable housing's role in attracting and retaining workers: The availability of affordable housing near jobs has been recognized by both employers and workers as an important asset. While few studies have directly measured the role of affordable housing on employee attraction and retention, formal and informal surveys consistently demonstrate its perceived role in a vibrant economy. Examples include:

- In a national survey of more than 300 companies conducted by Harris Interactive, more than half (55 percent) of the largest companies (with more than 100 employees) acknowledge an insufficient level of affordable housing in their proximity. Two-thirds of these respondents believe that the shortage "is having a negative impact on retaining qualified entry-level and mid-level employees" and well more than half attribute some level of employee turnover to the resulting long commutes (Urban Land Institute 2007).
- In the same survey, more than half (57 percent) of the more than 1,200 workers polled say that they would consider moving closer to work if they could find affordable housing near their workplace.

CASE STUDY #1: MONTGOMERY COUNTY, IN

Klacik (2003) investigates claims by local business leaders that the county's workforce does not have the skills to fill available jobs. The author finds that the demographic and socioeconomic characteristics of the Montgomery County workforce do not support these claims and concludes that it is workforce quantity – not quality – that is hindering economic growth in the county. The county is a net importer of workers, a circumstance that Klacik attributes to minimal housing production and housing prices that are not in line with local wages. The implications are clear: A more affordable housing stock would allow qualified workers and their families to reside near Montgomery County's employment opportunities, likely making the county's businesses more productive and profitable.

CASE STUDY #2: THE GULF COAST

Recovery efforts in the Gulf Coast provide another example of affordable housing's impact on local economic development. In the years following Hurricane Katrina, employers in the Gulf Coast witnessed economic recovery slowed by an insufficient workforce, which business leaders attributed in part to a lack of affordable housing. Re-emerging industries such as shipbuilding and fishing could not attract the workers they needed because the communities could not house them affordably (Gillette 2007a, 2007b). This situation, which was exacerbated by the limited supply of housing, generally, in the wake of Hurricane Katrina, serves as a useful reminder that affordable housing is an essential ingredient for successful economic (re)development.

This figure jumps to 67 percent for households with annual incomes less than $50,000 and 76 percent for respondents between the ages of 18 and 34 (Urban Land Institute 2007).

- More than half of Miami-Dade County Chamber of Commerce members report that high housing costs make it difficult to recruit employees (59 percent) and negatively impact employee retention (52 percent) (The Metropolitan Center at Florida International University 2006).

- A survey of large and fast-growing companies in New York City found that roughly 64 percent believe that the local housing market compromises efforts aimed at recruiting and retaining employees (McCall 1999).

Few empirical studies have tested the employee and employer perceptions recorded in these surveys, but one examination of employer-assisted housing (EAH) programs suggests that affordable housing programs may contribute to employee retention. In her 2008 study of Aurora Health Care's EAH program, Ross (2008) found that participants had a longer average tenure with the company than employees overall. In a simple comparison of turnover rates between all Aurora employees and Aurora employees participating in the EAH program, turnover was between 6 and 8 percentage points lower for the latter group. Ross also found that EAH participants were consistently rated higher, on average, in annual performance reviews than their non-participant peers. Note that the study was not able to test the direction of causality, so it remains unclear whether participating in the EAH program leads to lower turnover and better work performance, or whether dedicated employees with a long-term view are more likely to buy a home through the EAH program.

Evidence to support the hypothesis that affordable housing, or a lack thereof, affects employer and regional competitiveness could be strengthened by two strands of research. The first strand should focus on the ways in which employer recruitment and retention efforts are hampered by a lack of affordable housing — or complemented by the availability of affordable housing and corporate efforts such as EAH. The second strand, focusing on employees, should investigate the role of affordable housing in both job-search behavior and job satisfaction.

Affordable housing's role in attracting businesses: In a survey of company executives primarily involved in selecting the location of new facilities, Gambale (2009) reports that the availability

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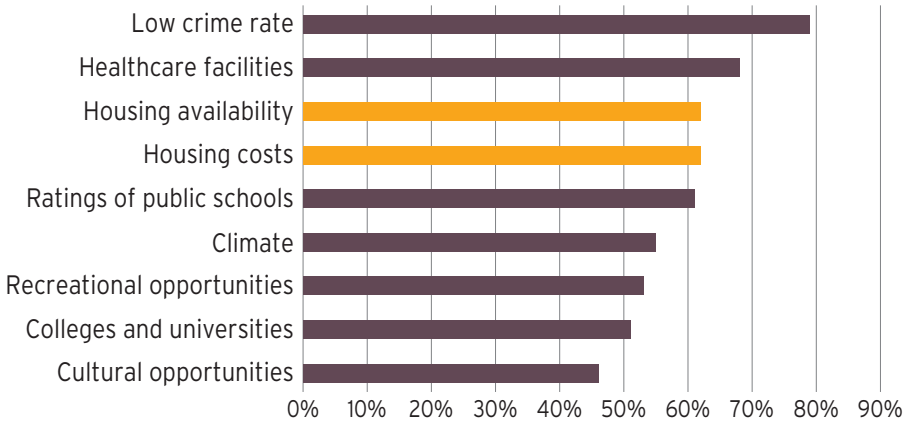
FIGURE 3. Relative Importance of "Quality of Life" Factors in Facility Site Selection



Source: Figure 25 in Gambale, Geraldine, 2009

and cost of housing are important considerations for roughly 62 percent of respondents (Figure 3). Although housing is not as significant a consideration as labor costs or highway access, for instance, it ranks behind only crime rate and healthcare facilities among all "quality of life" factors and ahead of factors like the quality of public schools, climate, and recreational/cultural opportunities, suggesting that affordable housing can have an impact on a region's economic development prospects.

Based on findings from a survey of New York City's largest and fastest-growing employers, McCall (1999) reports that 86 percent of respondents believe that the city's housing supply and costs are barriers to attracting businesses from other locations, and roughly 79 percent believe that housing conditions inhibit the formation of new home-grown businesses. Three-quarters of respondents also believe that "other regions in [the] country [are] more attractive than NYC because of housing" (McCall 1999: 16).

Migration away from areas with high housing costs: Although they cannot be used to prove any cause-and-effect relationship, migration patterns appear to support the notion that some households choose lower-cost metropolitan areas over the highest-cost regions. Between 2000 and 2006, 23 of the 35 metropolitan areas in the U.S. with the highest housing costs (e.g., Honolulu, San Francisco, Boston, New York) lost population to domestic out-migration, by an average of 6 percent. During the same time period, domestic in-migration led to growth rates of 2 to 6 percent in housing markets with average to above-average costs (e.g., Minneapolis, Denver, Santa Fe), suggesting that the highest-cost housing markets have trouble competing with less expensive metros for mobile workers and their families (Bluestone, Stevenson, and Williams 2009).

Focusing on the same trends, the Center for Continuing Study of the California Economy (2009) notes that the state began experiencing domestic out-migration

Between 2000 and 2006, 23 of the 35 metropolitan areas in the U.S. with the highest housing costs lost population to domestic out-migration, by an average of 6 percent.

in 2004 following a period of extreme housing price growth. Out-migration began after the median housing price in California increased from 60 percent above the U.S. median in 2001 to 130 percent above the U.S. median in 2004. As housing in California became relatively more expensive through 2007, the pace of out-migration accelerated. The authors admit that this could be a result of homeowners "cashing out" their home equity and leaving the state for more affordable locales but also provide an alternative explanation:

> "On the other hand the price gap reduced the incentive for people from other states to move to California. In fact during these years California's housing 'unaffordability' was probably the principal competitive disadvantage facing the state" (9).

Whether Californians were leaving with their equity or non-Californians were opting for more affordable destinations, the impact of high housing costs on the state's labor pool appear to be negative.

Chakrabarti and Zhang (2010) analyze housing and employment trends and show that an increase in the ratio of housing prices to income can slow the rate of employment growth in a regional economy. Using data for California cities between 1993 and 2004, the authors estimate that a one-unit increase in this ratio can reduce employment growth by up to two percent in a two-year period. (In other words, a city in which the median-priced home sells for three times the median household income could expect two percent slower employment growth over two years than a city in which the median price is only double the median income.) These findings hold up when they apply a similar analysis to U.S. metropolitan areas between 1980 and 2000. Due to data constraints,[17] these findings should be viewed as suggestive rather than conclusive, but they are consistent with other studies linking high housing costs to out-migration. Given that a skilled labor force is important to nearly 87 percent of company executives when choosing a site for a new facility — ranking sixth out of 35 factors (Gambale 2009) — a locality must offer an appropriate level of affordable housing if it wants to attract skilled workers, and, in turn, new and expanding businesses.

Economic liability of congested roads: In cities that do not provide sufficient housing that their workers can afford, essential employees may be faced with long daily commutes, which may contribute to traffic congestion. Congested roads can reduce the profitability of local businesses by increasing operating costs and by shrinking the area from which businesses can expect to draw both customers and workers (Cambridge Systematics, Inc. 2005). Cities that fail to address congested roads "may find their competitive edges slipping away to more favorable locations" (Hartgen and Fields 2006: 38).

It stands to reason that investments in affordable housing development near job centers or areas with good public transit can help reduce the extent of such a competitive disadvantage. Additional research is required to make the explicit linkages between a lack of affordable housing near job centers, traffic congestion, and location decisions of new or expanding businesses, but the hypothetical connections seem sound.

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[17] Because it is difficult to discern the direction of causality in a regression analysis of housing prices and employment trends (i.e., whether relative housing costs are affecting – or being affected by – job growth), the authors use "instrumental variables" as proxies for housing affordability. Climate variables such as mean temperature and precipitation levels are used as proxies for housing affordability because the authors find that they are strongly correlated.

5. In Addition to its Direct Effects, the Development of Affordable Housing Can Improve a Locality's Fiscal and Economic Conditions in a Number of Indirect Ways

Municipalities stand to gain from the development of affordable housing if the activity leads to appreciating values for nearby homes, thus creating a more robust tax base. While the concern that affordable housing may drive down property values is often raised by local property owners, studies are more likely to show that affordable housing has either no effect or a positive effect on property values than they are to link affordable housing development with a significant decline (Center for Housing Policy 2009). Factors such as the type of subsidy program, the strength and stability of the neighborhood, the size of the development, and what it replaced (e.g., a vacant lot) appear to play a role in determining how new affordable housing will influence property values (Ellen 2007). In their study of HOPE VI redevelopments, Zielenbach et al. (2010) argue that site location, the density in the surrounding neighborhoods, tenant incomes, and the strength of the overall real estate market in which the project is situated are among the factors that can affect how successful these efforts can be at spurring local economic growth.

Where the development of affordable housing does have a positive effect on surrounding property values, the fiscal windfall for municipalities can be significant. A look at the development or substantial rehabilitation of 66,000 units in New York City between 1980 and 1999 finds increasing home values within 2,000 feet of such activity (Schwartz et al. 2006). The authors estimate that properties within this distance appreciated to such an extent that New York City could expect roughly $2.8 billion in additional property tax revenue over the ensuing 20 years (in 1999 dollars), which more than makes up for the city's $2.4 billion investment in the program. Although this arithmetic does not consider federal and state investments in the projects, it does show that the development of affordable housing can generate significant revenue for a municipality through its impact on the value of nearby properties.

In the same vein but on a much smaller scale, Walker's (2010) analysis of a tax credit project in the Bronx suggests that the property's redevelopment led to significant appreciation in nearby values — on the order of $22 million in aggregate. Assuming the city reassesses these neighboring properties, this appreciation could generate incremental tax revenue of $1.2 million annually. As Walker states: "In effect, the stream of tax payments in years after initial tax credit investment represents substantial public recapture of the original outlays" (2010: 7).

Affordable housing programs bring housing costs below market rates, which in turn increases the money available for purchasing goods and services in the local economy. In addition to the stimulative effect of its construction or rehabilitation, affordable housing (whether new or existing) can benefit a local economy by reducing housing costs to affordable levels, thus creating more room in the family budget for local purchases.[18] A comparison of the 25th percentile rent with the rents paid by public housing residents shows that residents of public housing save an average of $497 per month or almost $6,000 each year — an amount equivalent to 57 percent of their annual household income (Econsult 2007). Using a similar methodology and coming to similar conclusions, Walker (2010) estimates that monthly housing costs for residents in two Low-Income Housing Tax Credit buildings in the Bronx are roughly $500 lower per month than if they paid the Fair Market Rent — a doubling of these residents' residual income.[19] These studies confirm that affordable housing makes more money available to residents to satisfy their non-housing needs and likely results in a significant boost to local spending on such essentials as healthcare and groceries.[20] Low-income families tend to spend their residual income to fulfill

[18] The net gain for the local economy is maximized when the source of the housing subsidy is non-local (i.e., federal/state government or philanthropic) in nature.

[19] As defined here, residual income is the income left over after paying for housing, transportation, and utilities — the three items in the budget that are most influenced by where one lives.

[20] Subsidized housing allows residents to spend more residual income on non-housing goods. There are many different types of affordable housing programs, and each type provides a somewhat different level of subsidy. The extent to which a program increases residual income is dependent on the level of subsidy provided: Those that reduce rents far below market levels (e.g., public housing) have a greater capacity to increase residual income than do those that provide a shallower subsidy (e.g., inclusionary zoning). In addition, the extent to which these expenditures benefit the local economy is determined by which non-housing goods are purchased, and from which establishments.

basic, but otherwise unmet, household needs (Bivens and Edwards 2010), generating significant immediate economic activity. By contrast, higher-income families are less likely to spend and more likely to save increases in residual income, which has much less of an immediate impact on the economy.

Just as affordable rents and mortgage payments increase residual incomes, so too can the reduced transportation costs associated with homes built in close proximity to public transit or job centers. Studies have shown that households that live in dense, mixed-use communities with access to transit and jobs spend less on transportation than do households where the automobile is the only viable option for mobility.[21] For working families earning between $20,000 and $35,000 (in 2000 dollars), those in central cities spend a significantly smaller share of their income on housing and transportation costs (54 percent) than do those living at greater distances from employment centers (70 percent) (Lipman 2006). In order for lower transportation costs to translate into increased local spending on other goods and services, the combined costs of housing and transportation must remain affordable. Cities and states can utilize a variety of programs (e.g., inclusionary zoning) to reduce housing costs for low- and moderate-income households in transit-oriented communities.

The same principle applies to homes that are constructed or rehabilitated in a manner that substantially reduces energy use. With or without a subsidy, energy-efficient homes can significantly reduce energy costs for low- and moderate-income households,[22] increasing the residual income available to meet daily needs. As an example, the United States Department of Energy (2010) estimates that low-income families who participate in the federal Weatherization Assistance Program reduce their energy expenditures by an average of $437 per year. These savings can, in turn, fuel local economic growth: "...[M]oney saved from lower energy bills can be plowed by new homeowners into housing-related services such as landscaping and remodeling, leading to additional local employment opportunities" (Econsult 2009: 8).

In addition to increasing residents' residual income, the construction and rehabilitation of homes to make them more energy-efficient can have significant economic implications for localities that encourage or incentivize such practices. The environmental benefits of energy-efficient homes are reason enough to pursue sustainable building practices, but energy-efficient housing practices also produce benefits that accrue to the local economy. The various energy rating systems and standards increasingly adopted in new home construction by and large promote the use of local products. The theory is that by using materials produced locally, builders and, ultimately, consumers are able to "reduce the embedded transportation energy usage associated with construction" (U.S. Green Building Council 2008: 81). The practice of "buying local," and thus using materials produced by regional suppliers, could translate into more jobs and higher capture rates (i.e., less "leakage") of the indirect spending associated with new housing construction.

The economic development effects of the trend toward energy-efficient homes are not limited to new construction. To the contrary, efforts to make existing homes more energy efficient can also increase local employment and economic activity by creating a market for green-certified contractors, skilled construction laborers, and construction materials.

6. More Research is Needed to Evaluate Other Possible Ways in Which the Development of Affordable Housing May Contribute to Local Economic Growth

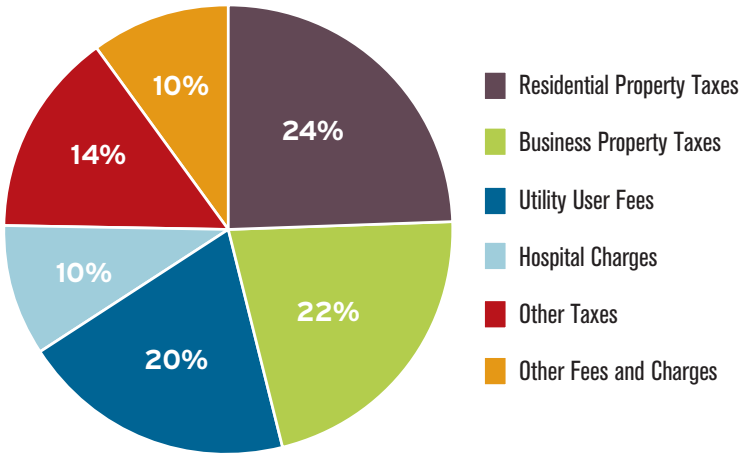
When revenues generated by occupants of affordable housing exceed the costs of providing services, affordable housing could generate ongoing fiscal benefits for communities. In addition to the revenues that localities gain during the construction phase, local governments can expect to receive revenues (i.e., taxes and fees) from the occupants of affordable housing in the years after it is built. Existing research suggests that ongoing annual tax

[21] The Center for Housing Policy, the Urban Land Institute, and the Center for Neighborhood Technology have collaborated on three reports that explore combined housing and transportation costs in three regions: Washington, DC (*Beltway Burden*); the San Francisco Bay Area (*Bay Area Burden*); and Boston (*The Boston Regional Challenge*). These reports can be found at www.nhc.org.

[22] For more information on this topic, please refer to the Improve Residential Energy Efficiency toolkit at www.housingpolicy.org.

revenues from affordable housing can be substantial. For example, in its analysis of two hypothetical 100-unit tax credit projects, the National Association of Home Builders (2010) estimates that ongoing annual revenues from these family and senior properties are $441,000 and $395,000, respectively. The three largest sources of these recurring revenues are residential property taxes, property taxes from the businesses supported by the residents, and utility user fees (Figure 4).

FIGURE 4. Ongoing Sources of Local Revenues for a 100-Unit Family LIHTC Property



Source: National Association of Home Builders, 2010

But tax revenues are only one side of the equation. Whether subsidized or market-rate, a residential development can be said to have a net positive fiscal impact only if taxes exceed the cost of providing services to the residents – services such as education, health and social services, police and fire protection, and sanitation. In order to estimate the net ongoing fiscal impacts of affordable housing, future research should focus not only on future tax revenues but also on the costs of providing services to household members. The following studies address this issue in part but do not provide conclusive evidence for affordable housing:

- An analysis of *market-rate* housing by the National Association of Home Builders (2009b) suggests that based on the average cost of providing infrastructure and services to new households, housing construction represents a source of net income for many local governments not long after development. The annual revenues generated from 100 new, occupied market-rate apartments exceed the costs of services (such as education and law enforcement) by roughly $92,000 annually in the years after completion. With this surplus, the average locality can pay off its initial investment in infrastructure within ten years of construction. These results are likely conservative because they assume that (a) local jurisdictions pay for almost all associated infrastructure costs (except highways and roads) with no contribution from developers and (b) there is no existing infrastructure capacity to support any of the 100 new households.

- A study by the Blue Sky Consulting Group and the Center for Housing Policy (2010) estimates that even after several years of steep declines in home values, the *median-priced home* in California generates more tax revenue than it consumes in government services annually and, on average, has a positive fiscal effect on state (+$1,869), city (+$262), and county (+$45) budgets each year after it is built and occupied. The study includes a sensitivity analysis in which the sales price is adjusted but other factors that affect a home's fiscal effect remain unchanged. For homes that sell for 25 percent below the median price, the authors report a positive ongoing annual fiscal impact of $928 for the state and $140 for California cities. The ongoing annual fiscal impact of these lower-cost units is slightly negative for counties overall (-$50 per year) but is positive when construction occurs in an incorporated area (+$115 per year), as is the case for four-fifths of statewide activity.

Although more research is needed to confirm the results noted above for different types of affordable housing, these studies provide templates for future analyses investigating the extent to which low-cost or subsidized housing generates ongoing fiscal benefits.

The development of new affordable housing could create spillover effects in the form of local consumer activity, employment opportunities, and private-market investment. Little research evaluating the impact of affordable housing development on "spillover" economic activity could be found in this review of the literature. As with other forms of public investment, a large-scale (re)devel-

opment of affordable housing could reasonably be expected to spur the private market to respond with its own investment in residential, retail, or commercial real estate in the surrounding area. But to date, there has been little investigation into whether the impact of affordable housing construction is limited to those modeled above, based primarily on the construction and occupation of the new units themselves, or whether this investment can create the energy to jump-start a self-sustaining round of spillover economic development in neighboring areas.

In one analysis that attempts to directly test this hypothesis, Higgins (2001) investigates the potential spillover effects of homeownership programs offered by community development corporations in five neighborhoods. In one Seattle neighborhood, the author concludes that the development of 154 affordable for-sale homes played a primary role in a more than doubling of retail sales in the vicinity, compared to a 32 percent citywide increase. Additionally, average commercial real estate transactions in the neighborhood doubled from $4 million to $8 million annually. Increases in retail sales in a second neighborhood were limited to building materials and furniture, and data were not available for the other three case studies.

In a study investigating possible spillover effects related to HOPE VI redevelopments, Zielenbach (2003) goes beyond standard quantitative analysis and conducts in-depth interviews at two sites in Milwaukee and Seattle. He finds that replacing substandard public housing with new affordable housing has contributed to more positive perceptions about future economic growth and, in fact, some level of residential and commercial investment in surrounding neighborhoods. However, Zielenbach cautions that these HOPE VI redevelopments "have been only one of several critical factors" (2003: 650) that have led to revitalization, so spillover effects cannot be solely attributed to the affordable housing activity itself.

As these studies illustrate, the investigation of spillover effects is hindered by a scarcity of available data. Instead, research on the ways in which affordable housing development affects neighboring communities almost universally relies on the change in value of nearby properties. This information is more readily available and is seen as an acceptable proxy for other positive outcomes because, as Ellen (2007) states: "...to the extent that any of these outcomes occur, they should be capitalized into, or reflected in higher property values. Put simply, if a neighborhood becomes a better place to live, people will be willing to pay more to live there" (4).

Although the development of affordable housing does not consistently affect surrounding property values in the same manner — likely because the type, scale, and context of each development can differ in important ways — existing research has more frequently associated it with no impact or rising values than with declining values (Center for Housing Policy 2009). A body of research also suggests that rising property values can reflect improving neighborhood conditions and positive community changes (Walker et al. 2002; also see research cited in Galster, Tatian, and Accordino 2006). Taken together, these strands of research suggest that the development of affordable housing can positively influence conditions in the surrounding neighborhood. However, the affordable housing field would benefit from additional research that more directly investigates whether the development of affordable housing encourages subsequent, unsubsidized private investment not currently captured in the standard input/output models, which are designed to measure the impact of only the initial housing investment itself.

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