

Jump-Starting Cleveland's New Urban Housing Markets: Do the Potential Fiscal Benefits Justify the Public Subsidy Costs?

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Abstract

This article presents an analysis of subsidizing new inner-city housing in Cleveland, OH. It focuses on the fiscal costs and benefits to the city and assesses the effectiveness of current subsidy programs. Costs include land, site cleanup, infrastructure, tax abatement, and subsidized first and second mortgages. Fiscal benefits include property tax revenues (for both the new housing development and the resulting positive neighborhood externalities) and income tax revenues. The case study examines 10 new housing projects (40 percent of new projects) started in Cleveland between 1990 and 1993.

The city subsidy per unit was \$25,600, and average benefits were \$12,800. Most costs were realized from lot preparation. Large subsidies connected to jump-starting were associated with a substantial increase in housing starts despite a two- to three-year lag time. Policy recommendations for more efficient subsidies include having local planners prepare and market lots and reducing tax abatement time.

Keywords: Housing policy; Housing subsidy; Cost-benefit analysis

Introduction

Many older midwestern central cities, such as Cleveland, have experienced a severe population loss over the past few decades. The reasons underlying this decline are well known and are not limited strictly to central cities or to the Midwest. These patterns include the reorganization of industrial employment away from central cities toward the suburbs as well as demographic trends such as declining birth rates, a correspondingly lower number of persons per household, and smaller population cohorts in the household-forming young adult age groups. Over the years, many middle-class central-city residents able to follow jobs have migrated to the suburbs or to other metropolitan areas, leaving many central cities with abandoned land, fiscal stress,

and concentrated poverty. Their reasons for leaving include concern about poor public schools, personal safety, and lower-quality public services (Bier 1990).

As a result, central-city populations declined precipitously in many moderate-sized midwestern communities. For example, Cleveland, St. Louis, Pittsburgh, and Buffalo all lost 43 to 54 percent of their population between 1950 and 1990, and Cincinnati lost 28 percent (Downs 1996).¹

Given fiscal stress, declining tax bases, deterioration in services, and concentrated poverty, mayors and community leaders of Cleveland and many other midwestern cities face an uphill battle in attracting new residents. Communities such as Cleveland must undertake aggressive strategies to increase the population base by jump-starting inner-city housing markets.²

The financial and political benefits to community leaders from stimulating new housing are substantial. Fiscal benefits include direct growth in property and income taxes from new units, as well as positive externalities such as the increase in property taxes from nearby homes. Nonfiscal advantages that can accrue from new subsidized housing construction include stabilized neighborhoods, a positive community image, political support, and the elimination of unsightly empty lots (Varady 1982). In times of fiscal constraint, cost-benefit analysis can be an important tool for community developers in guiding scarce resources to worthy housing projects experiencing market failure.

The literature on subsidy programs for new housing directs minimal attention to large American central cities. Berenyi (1989), for instance, surveyed 51 major U.S. cities concerning local funding (i.e., locally raised) sources for housing initiatives. Although 47 percent of the cities operated at least one local housing funding program or initiative, the average number of programs was just over two. In a survey of 66 housing trust funds (HTFs), Connerly (1993) found that most HTFs target affordable housing and receive funds through nonfederal sources. Several HTFs support new construction as a primary activity, and a few also provide financing subsidies for home buyers

¹ There was also a smaller but corresponding loss in the number of dwelling units.

² In this article, "jump-starting" refers to substantial financial inducements to housing developers or buyers to initiate new housing construction in markets that have been inactive for several decades. The subsidy programs can be broadly classified by either demand- or supply-side incentives.

(Connerly 1993). Finally, Walker (1993) examined the role of community development corporations (CDCs) as catalysts in residential construction.³ CDCs' nonprofit status permits ready access to Community Development Block Grant (CDBG) and HOME program federal funds. Among cities with populations over 100,000 where CDCs are most active, Walker found, more than half provide operating support, technical assistance, and predevelopment "soft" costs (e.g., market studies).

Stimulating demand for new housing

On the demand side, there has been a perception of limited demand for new inner-city housing. Many central-city residents left because they saw the cities as unsafe and the schools as inferior (Bier 1990; Varady and Raffel 1995). Those who may be initially attracted back to the city include relatively affluent young urban professionals without children who work downtown and highly value the excitement of urban culture and amenities. A similarly motivated submarket would be "empty nesters." Because of their affluence, these market segments may not require certain types of financial inducements (e.g., help with down payments). On the other hand, the affordable housing market (e.g., from \$70,000 to \$100,000 per unit) usually targets first-time home buyers, who often need help in qualifying for mortgage financing, for both down payments and monthly payments. Demand for central-city housing may be categorized into at least 10 distinct submarkets based on income, life cycle, and ethnic and racial identity (Hughes and Lang 1996).

Even though the requirements for financial institutions in the Community Reinvestment Act (CRA) made more mortgage capital accessible to urban home buyers, many first-time home buyers cannot qualify because of high monthly payments. Fannie Mae has helped to alleviate capital market failure by bringing more private mortgage financing into play and reducing interest rates and down payment requirements for many inner-city buyers. Many state housing finance authorities also provide subsidized loans to first-time home buyers. Local government programs that provide below-market-rate first mortgages for new housing may, in fact, overlap with or duplicate existing programs. Second mortgage programs, which help buyers with down payments, do not generally confront this overlapping problem.

³ CDCs are not-for-profit community-based housing sponsors or developers. A CDC can operate as sole developer of a housing project or in partnership with a private developer.

Many communities have responded by developing demand-side housing inducements. For example, residential property tax abatement, frequently used by local governments, lowers the overall monthly house payment. Tax abatement proves to be a powerful incentive for attracting new home buyers to the central city (Koven and Koven 1993). When Des Moines initiated a five-year residential property tax abatement program in 1987, the typical buyer's housing cost was lowered by \$3,200 on an average house priced at \$83,300. The program was well received by the public: Two-thirds of home buyers who actually bought a new house in the city confirmed that tax abatement played an important role in their decision. Varady's survey (1990) of prospective middle-income home buyers supports this: Half of respondents thought that tax abatement would be an effective incentive to buy a house in the city of Cincinnati. Cleveland's use of tax abatement is discussed in detail below.

Creating a supply of housing lots

On the supply side, substantial barriers confront housing developers when they try to assemble and prepare buildable housing sites. Relatively low sale prices for existing housing in some city neighborhoods make it difficult for them to justify building and to obtain financing for new housing at sale prices very far above existing market prices. Because developing new inner-city housing projects can be risky, nonprofit groups emerged in Cleveland and other cities and represent a new force for creating new markets.

Land assembly for housing sites presents many problems to everyone involved. Old land use patterns in many central cities result in residential lots with 30 to 40 feet of frontage, while new suburban-style homes often require much wider frontage to accommodate attached garages. Other high-density infill housing on existing lots may require additional infrastructure investment (e.g., alley upgrades, underground cable, or drainage) to comply with market conditions demanding off-street parking and garbage removal.⁴ Also, new housing products may not comply with existing building or zoning codes (e.g., setbacks). Projects can be delayed because variances are required on each nonconforming lot. In communities where land abandonment remains a problem, property ownership may be hard to trace, and multiple heirs may exist. Simply put, obtaining clear title to the

⁴ Because of the relatively weak market position of the central cities, development exactions do not generally become an issue.

property may be a legal nightmare. Inner-city lots often come contaminated with construction and demolition debris, asbestos, and residual chemicals (sometimes hazardous) from prior land uses (these sites are also known as *residential brownfields*). The land's environmental status needs to be assessed prior to lot development, usually at a huge expense in time and money.

A popular response in many larger cities has been to create a "land bank" or similar arrangement in which the municipality accumulates property through property tax foreclosures or other processes and makes the land available to developers at very low cost. Land banks are present in several communities, including Atlanta, Boston, Buffalo, Chicago, and New York (Berenyi 1989); Des Moines, St. Louis, and Omaha (Simons and Hall 1993); and Cleveland.

Case study: Cleveland

This article presents a case study of the fiscal (on-budget) costs and benefits of subsidizing new inner-city housing in Cleveland, where jump-starting new housing markets has become an important community development activity. Cleveland subsidizes both affordable and market-rate housing projects.⁵ From the perspective of Cleveland's Department of Community Development (CD),⁶ these are the central policy questions:

1. What are the costs borne by the municipal entity when jump-starting new housing?
2. What are the fiscal benefits?
3. What is the ratio of costs to benefits?
4. How quickly do the inducements stimulate new housing starts?
5. Do demand or supply inducements more effectively jump-start markets?

⁵ Funds available for distribution by municipal governments, regardless of source, are analyzed. Other political jurisdictions (e.g., schools, county) are considered outside the direct fiscal analysis. This research covers, but does not exclusively focus on, affordable housing.

⁶ CD operates as Cleveland's lead agency in promoting new housing and commercial activity.

6. Is the current level of jump-starting expenditures sustainable in the long run?
7. If not, what can be done to make coordinated public assistance to new housing more efficient?

This article compares Cleveland's housing subsidy programs with several other midwestern cities' efforts. We assume that Cleveland's housing market represents the typical dilemmas faced by other midwestern cities. However, Cleveland's programs stimulate new housing from a more comprehensive approach. We assess the success of the subsidy programs, including the lag time until results are generated, and consider the relative efficiency of demand- and supply-side inducements, the sustainability of current subsidy levels, and the need for a more proactive role for the city's community development department.

Our study analyzes only fiscal rather than economic, social, or political factors. We acknowledge that omitting nonfiscal factors from the cost-benefit analysis may limit its usefulness to public decision makers.⁷ However, this analysis can serve as a benchmark for guiding cost-benefit analyses for other new inner-city housing, particularly in cities, like Cleveland, that pursue atypical and aggressive subsidy programs for new housing. Further, similar research on this topic is not publicly available to decision makers judging the efficiencies of their programs. Another factor is that Cleveland's mature and very active nonprofit housing development sector serves as a strong catalyst in the delivery of housing subsidy to new housing construction projects.

Cleveland exhibits trends typical of a mature midwestern central city with a declining industrial base. Its population fell by 45 percent in 40 years, from a high of about 915,000 in 1950 to 506,000 in 1990. During the same period, the number of housing units decreased by 46,600 units, from 270,900 to 224,300, dropping by 17 percent (U.S. Department of Commerce 1950, 1990). Mayor Michael White (elected in 1989) intends to offset this precipitous drop in housing units by developing new housing in the city and has set a goal of 2,000 new housing units per year (*Cleveland's Field of Dreams* 1994) in place of the previous decade's anemic average of 50 units per year. A recent random-sample survey of potential demand for new housing in metropolitan Cleveland indicates an unmet demand for more than 20,000 new units (Bier 1995).

⁷ We also narrow our analysis to the city, rather than including schools or other overlapping political jurisdictions.

Cleveland's CDCs receive funding from a CDBG and local foundations. In addition, the city's community development director, a former CDC head, remains very supportive of nonprofit housing development organizations. Nearly all the housing projects built in the city in recent years have involved major CDC activity; eight or more CDCs have been involved in housing projects of 10 or more units (Bresler 1995). Neighborhood Progress, Inc. (NPI), a nonprofit umbrella development entity, is charged with efficient allocation of foundation moneys and also develops its own projects. NPI, the Local Initiatives Support Corporation (LISC), and the Enterprise Foundation also play major roles in assisting CDCs by offering technical support, funding soft costs, providing project gap funding, and otherwise assisting in "patchwork" financing (Walker 1993).

CD administers the federal CDBG, which provided approximately \$34 million in 1994. About half this amount was devoted to housing programs. The department also manages the federal HOME program, which provided another \$7 million for Cleveland housing in 1994 (Resseger 1995).

Sources of funds for new housing

The CD reconfigured its resources into several programs that developers can tap into for housing subsidies. The available, locally applied, sources of funds are listed in table 1. These funding pools, an intermediate step, are not themselves subsidy programs, but they provide the resources through which the subsidies are channeled. In other words, federal subsidies are allocated to local decision makers and then are made available to end users such as housing developers. These funding pools include the housing trust fund, ward allocation grants, the land bank program, neighborhood development bonds, and forgoing future revenues through property tax abatements. CD also coordinates its efforts with local philanthropic foundations and major nonprofit entities that provide loans and grants to CDCs and for-profit housing developers. Figure 1 is a flowchart of sources and uses of funds and other resources used to jump-start new housing.

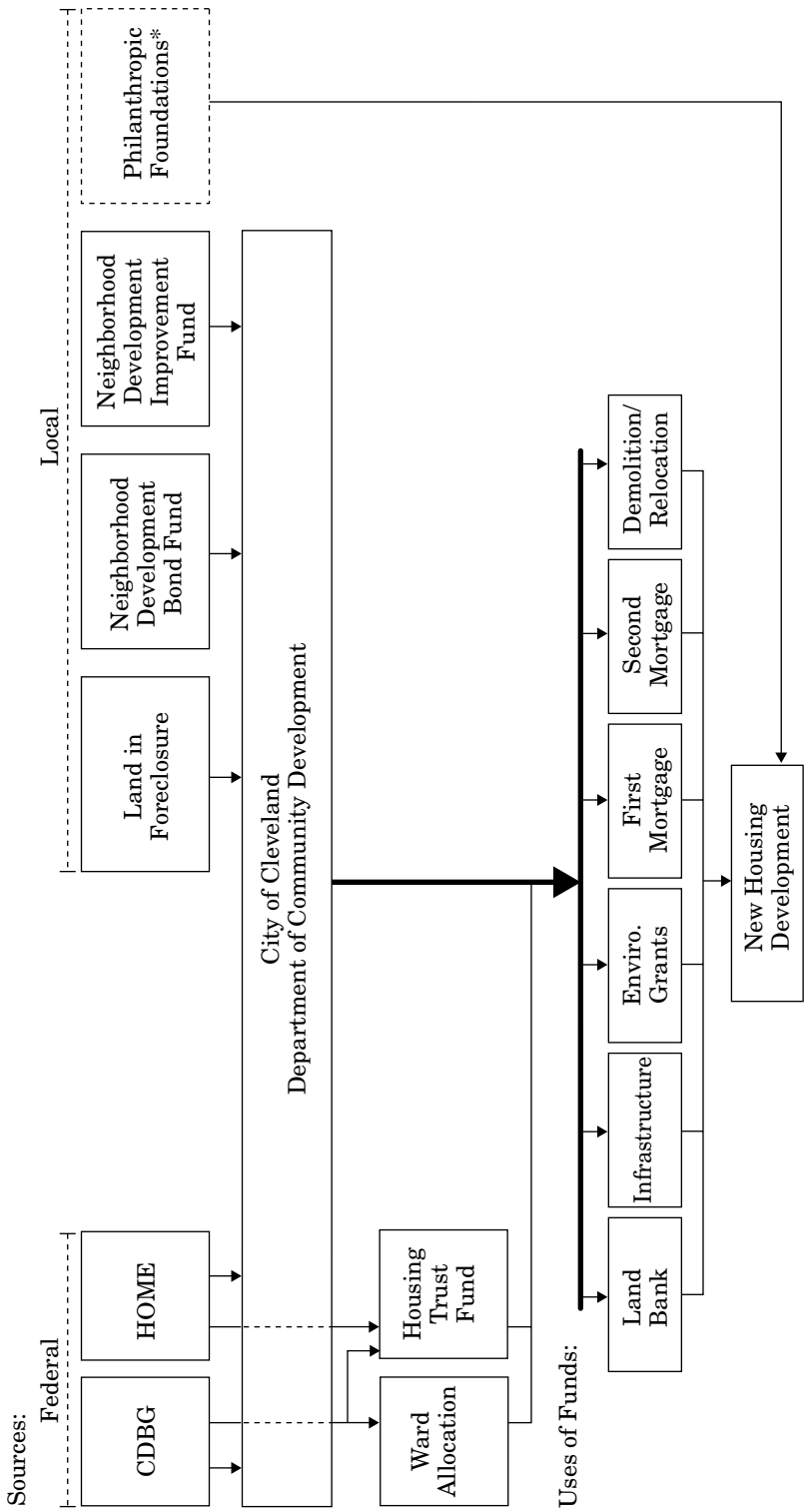
CD uses a menu-type approach to jump-starting the housing markets; that is, it generally makes all subsidies available to developers on a first-come, first-served basis. The housing subsidies (costs to the city) can be categorized as either

Table 1. Funding Sources for New Housing in Cleveland, OH

Resource	Program Focus	Mechanism	Funding Sources	Supply or Demand	Subsidy
Housing trust fund	New housing rehabilitation	Allocated on a competitive basis for low- to moderate-income housing projects larger than 15 units	CDBG and HOME	Supply and demand	
Ward allocation grants	Each of 21 wards receives \$250,000 per year	Councilpersons' discretion, typically for second mortgages and lot cleanup	CDBG	Supply and demand	
Land bank program	Lots with clear title, 5,000+ lots in inventory	Property tax foreclosure coordinated with Cuyahoga County auditor	Small fee paid to county, value is off budget	Supply	
Neighborhood development bond funds	Capital improvement (e.g., roads and infrastructure)	About \$1 million devoted to housing	Municipal general obligation bonds	Supply	
Forgoing future revenues	Buying down homeowner's housing costs	Property tax abatement on new improvements for up to 15 years, school district, city and county taxes	Off budget	Demand	
Other local initiatives (considered outside this analysis)	Mortgage loans from local banks to home buyers	Community Reinvestment Act	No city funds	Demand	
Private nonprofits	Housing development loans	Lawsuit from public utility, \$40 million, up to 20% for housing	Neighborhood Development Improvement Fund*	Supply and demand	
	Seed capital and gap financing	LISC, NPI, Cleveland and Gund Foundations, competitive grants, loans	No city funds	Supply and demand	

*Not available to projects in this study.

Figure 1. Sources and Uses of Subsidy Funds, New Housing Construction, Cleveland



*This funding source is not considered a city subsidy for the purpose of this analysis.

supply-side subsidies (e.g., making a buildable lot) or demand-side subsidies (e.g., making financing easier for the buyer). In general, supply-side subsidies represent cash expenditures by CD in the year lots are assembled. Demand-side subsidies often represent a reduction in the buyer's net housing cost over a period of a decade or more. These savings are converted to present value so that they can be compared with other subsidies and fiscal benefits.

Supply-side subsidies

Donated land

The city offers land bank parcels on an as-is basis to developers, priced at about \$100 per lot. Most lots sold have some known environmental contamination (e.g., construction and demolition debris from the previous unit) and dimensions too narrow for suburban-style market conditions. Thus, many of them need to be replatted by combining contiguous parcels to form buildable lots. Earlier research in Cleveland estimated that the cost to redevelop a previously used suburban-style residential lot for development ranged from \$7,000 to \$18,000, depending on its prior life as a residential, commercial, or industrial property (Simons 1994); a large portion of these costs was attributed to expected environmental cleanup.⁸ For this research, however, the value of the donated land subsidy reflects past city out-of-pocket costs associated with the lot (demolition and property maintenance) and replatting and processing fees. This value roughly equals the land's proportionate share (assumed to be 7.5 percent) of the residential unit's market price. The typical figure used in this analysis is about \$10,000 per new lot.

Environmental mitigation grants

As projects break ground, some developers encounter unforeseen environmental contamination that can severely threaten the project budget. In many cases, the city paid for these residential brownfield costs through environmental mitigation grants. These grants were included dollar for dollar in the analysis.

⁸ Land expense for a scattered-site housing project or one utilizing existing lots with a denser urban fabric would be much lower, but these projects could also face more market resistance in many neighborhoods because they are not suburban-style, low-density homes.

Local infrastructure improvements

The city may provide substantial upgrade and modernization of local roads with cul-de-sac streets, alley improvements, and other utilities, if needed. These costs were also included dollar for dollar in this research.

Demolition and relocation costs

These may be subsidized on a case-by-case basis and may include relocation of households and businesses and demolition of standing structures. Occasionally, project studies and other soft costs are part of this item and are included dollar for dollar.

Demand-side subsidies

Several subsidies are offered to make the units more financially attractive to buyers. The first two programs—property tax abatement and Cleveland Action to Support Housing—lower the homeowners' monthly principal, interest, property taxes, and insurance (PITI) payments. The third program supplies down payments from a city-sponsored second mortgage program.

Property tax abatement

The county and city encourage development by abating property taxes on new residential construction. Depending on the project's size, location, and timing, 7-, 10-, or 15-year property tax abatements are available on the built improvements (excluding land). This effectively drops the homeowners' property tax payments by about 90 percent over the abatement period.

For this research, the cost to Cleveland is an estimate of the present value of revenues not received over the abatement period at a discount rate of the city's cost of funds (5.33 percent). After consulting with local housing researchers, we assumed a 2 percent appreciation rate in the value of the housing (Bier 1995).

Cleveland Action to Support Housing

Cleveland Action to Support Housing (CASH), a subsidized first-mortgage program, offers below-market-rate financing to

qualified buyers.⁹ The program uses a linked deposit approach, in which the city puts a portion of the principal amount into a financial institution at no interest. The subsidy takes the present value of interest not received on the city's linked deposit. The interest rate was based on prevailing U.S. Treasury bonds, discounted at 5.33 percent over 15 years.

Second mortgage

These no-interest loans are available through the housing trust fund or ward allocation grants. Loans are to be repaid when the home is resold, but only if there has been sufficient appreciation. The Cleveland program is similar to Buffalo's, which offers up to \$25,000 to qualified buyers to help meet down payment requirements. The loan is forgiven if the buyer stays in the home for 10 years (Danzo 1993). For this research, depending on the project's arrangement with CD, we either calculated the second-mortgage subsidy in the same manner as CASH or assumed that it took the form of a grant to the home buyer and was not discounted.

Fiscal benefits to the city

This study modeled four fiscal benefits that pertain to new housing: the direct city share of property taxes from the new housing; property taxes from appreciation to nearby homes, which are considered positive externalities in this context; income tax revenue from future residents; and income tax revenue from construction workers. In this section, we explain how these benefits were calculated over the first 30 years following project occupancy.

Cleveland raises no applicable sales tax revenues, does not levy a use tax on construction materials, and does not assess a real estate transfer tax. Our analysis also includes an implicit assumption of zero marginal cost for additional provision of municipal services to new residents. For example, this assumes that police and fire services can be provided to new residents by present personnel covering the same geographic area, since excess capacity exists because of the large population loss over the past four decades.

⁹ In periods of low interest rates, and with CRA bringing more financial institutions into the market, this program has been less important than in previous years.

Direct property tax

Cleveland receives a relatively small portion of total municipal revenues from property taxes (about 15 percent). For new housing, the city receives its share of property taxes on land (from year 1) and building improvements (after the abatement period is over).¹⁰ The benefit (on the city share of tax revenues only) was calculated by taking the present value of funds to be received over the next 30 years at the same 5.33 percent discount rate used for the abatement period.

Indirect property tax from neighborhood effects

New residential construction should bring positive effects to the surrounding neighborhood. For example, new subsidized housing construction utilizes empty or vacant property, reducing the risk of fires and other undesirable activities (Varady 1982). Other intangible benefits may also accrue to politicians viewed by their constituents as rejuvenating the community.

Some positive externalities attributable to new housing construction are measurable, including property tax revenues to the city and other jurisdictions. Prior research indicates that subsidized new housing should have positive effects on existing homes in the neighborhood but that any property value increases would have limited geographic impact (Quigley 1982; Varady 1986).

This study explicitly considers the positive effects that new housing imparts on neighboring homes and incorporates this into the analysis through property tax revenue. Assuming that the local tax assessor increases the value of existing nearby homes, the indirect property tax revenues should accrue almost immediately, much faster than revenues from subsidized housing units that receive tax abatement.

A recent study in Cleveland measured new housing construction's effect on the sale price of nearby homes (Simons, Quercia, and Maric 1997). A hedonic regression approach was used, based on over 12,000 sales of existing one- and two-family residential

¹⁰ There is dissent among urban scholars concerning the efficacy of using property tax abatement for economic development purposes because of the regressive outcome (Keating, Krumholz, and Metzger 1991). Equity planner Norman Krumholz extends this argument to housing, stating that using residential tax abatement as an inducement would be appropriate for affordable housing but would be regressive if applied to market-rate housing where the beneficiaries earn above-average income.

units between 1992 and 1994. Results showed that for each new residential unit built, the sale price of existing housing within a one- to two-block area increased by \$670, when lot, housing, and other neighborhood factors are held constant. The study looked at 840 new housing units, including all the projects considered in our research. These effects were observable within two years of new construction, and a smaller but significant and positive effect was detected as far as four to six blocks away from new construction.

To incorporate these findings into the cost-benefit analysis, property value increases are assumed to be permanent.¹¹ The typical new housing project was surrounded by about 100 existing units. Scattered-site projects had as many as 150 existing units nearby, while projects built in areas with a high availability of lots but low residential density had as few as 10. The number of proposed new units was multiplied by the number of existing units impacted and then by \$670 to determine the increase in market value. This figure was reduced by the county auditor's 0.35 assessed-value ratio and then multiplied by the city's share of property tax revenues and by 30 years. Finally, the present value was determined by using the flows at the city's discount rate of 5.33 percent. This method yields large effects for modest projects in densely populated areas and relatively small effects for projects, large or small, in neighborhoods with many empty lots.

Income tax

More than 60 percent of city revenues come from worker and resident income tax. For this study, we used a household income of 40 percent of the housing sale price, with the income increasing 2 percent per year. From interviews with four Cleveland housing developers, we estimated that 43 percent of buyers were new residents to the city (others were excluded to avoid double-counting incomes already received from existing city residents). This revenue stream was discounted at 5.33 percent for the first 15 years of the project.

¹¹ The model assumes a linear relationship between the size of new residential projects and positive property effects. Only units within one to two blocks were considered to be positively impacted (this distance was proxied by using the county auditor's property tax map book page).

Income tax from construction jobs

Construction workers pay income tax as well. To account for this factor, we analyzed building costs and attributed 0.5 percent¹² of housing sale prices collected in the year of construction to this item.

Projects included in the sample

To determine the subsidy level of new housing in the city, we selected a representative sample of 10 city developments (with a total of 200 units) out of the 22 active housing projects (with 480 units). All units were in the development pipeline during the 1990–92 time frame. The projects can be characterized as small to medium, ranging in size from 8 to 46 units. Sale prices ranged from \$67,500 to \$150,000. The sample is generally representative of the total population: Thirty percent of the sample consists of scattered-site projects, compared with 31 percent in the population. The city's financial commitment to active projects was also reasonably representative: a sample average of \$242,300, compared with a population average of \$281,968. Finally, 70 percent of the sample projects sampled were east of the Cuyahoga River, compared with 82 percent in the total population.

The sample encompasses projects with different types of problems and needs. It also reflects varying development conditions: the use of different subsidy programs, whether the lead developer is classified as private for-profit or CDC, whether the project is scattered site or concentrated, whether there is new housing activity in the immediate area, and the extent of geographic dispersion (both in different neighborhoods and in overall balance east and west of the Cuyahoga River).

After the 10 sample projects were selected, we conducted interviews with the city neighborhood planning contact, the CDC representative, and/or the for-profit developer to collect pertinent information and gain a greater understanding of each project. Next, we organized the information into case studies that describe the background, financing, subsidy, effectiveness of

¹² We assumed that 80 percent of the home value was attributed to construction, of which hard costs represented 45 percent. Half the laborers were assumed to live in the city, with an income tax rate of 2 percent of construction wages. The other half were assumed to pay a portion of the tax in their home jurisdiction. The calculation's weighted average rounds to 0.5 percent of housing sale price.

subsidies, problems, and cost-benefit analysis for each project.¹³ Looking ahead to reduce inefficiencies, we queried developers about alternative ways to bring buildable lots to market.

Findings

Table 2 lists the 10 selected development projects, with the number of units, the supply-side and demand-side costs, and the extrapolated potential fiscal benefits to the city from each. It also presents the total subsidy for all units studied and the average net subsidy per unit; the latter is particularly useful for policy purposes. The most popular subsidies were property tax abatement (all 10 projects took advantage of this), land write-down (9 projects), and below-market first and second mortgages (5 and 7 projects, respectively). Because of the brief period covered by the study, certain subsidy programs (e.g., CASH) appear to be less important than they should be, because of low prevailing mortgage interest rates. Looking at other points in the business cycle would probably show a different mix of subsidy costs. Further, using a substantially higher discount rate would materially affect the present value of those outlays and benefits that are not “cash” (i.e., most demand subsidies and all benefits).

Costs

Figure 2 illustrates the cost analysis for each of the seven line items. Supply-side costs represent 59 percent of the total costs of \$5.1 million for the 10 projects in the sample. Infrastructure requires the highest level of subsidy, with \$1,117,000 (22 percent of total costs), followed by \$1,071,800 in land costs (20 percent), \$833,800 in tax abatement costs (16 percent), and \$830,500 in second-mortgage subsidies (16 percent). The present value of the city’s average cost for all housing subsidies runs about \$25,600 per new buildable lot, of which \$15,200 can be attributed to supply-side costs. Figure 3 shows the costs for individual projects, which range from a low of \$6,500 to a high of \$47,200 per unit.

Benefits

Total benefits for the 10 projects were estimated to be \$2.6 million, or \$12,800 per unit (table 2). Benefits to the city with a

¹³ The analysis reflects updated figures through April 1995 (Bresler 1995).

Table 2. Fiscal Costs and Benefits of New Housing: Selected Projects in Cleveland

Project Name	Number of Units	Supply-Side Costs					Demand-Side Costs					Fiscal Benefits						
		Average Price	Land	Infrastructure	Environmental	Demolition/Relocation	First Mortgage	Second Mortgage	Tax Abatement	Total Costs	Cost per Unit	Property Tax	Income Tax	Construction Jobs	Neighborhood Property Tax	Total	Benefit Per Unit	Cost-Benefit Ratio
Belvedere	20	130.0	205.0	0.0	260.0	12.0	0.0	46.1	85.4	608.5	30.4	122.5	102.7	8.9	11.5	245.6	12.3	2.5:1
Franklin Green	17	126.8	2.0	167.0	130.0	194.9	37.7	0.0	70.8	602.4	35.4	101.5	85.1	7.4	47.8	241.8	14.2	2.5:1
Kingsbury Court	46	109.5	399.0	550.0	0.0	0.0	0.0	70.9	229.3	1,249.2	27.2	171.7	196.1	17.1	222.8	609.7	13.3	2.0:1
Linwood Place	15	114.0	126.8	0.0	0.0	0.0	0.0	35.4	78.2	240.4	16.0	58.5	67.5	5.8	9.2	141.0	9.4	1.7:1
Renaissance Place	20	150.0	135.9	250.0	0.0	21.6	0.0	400.0	137.2	944.7	47.2	102.7	118.5	10.3	28.7	260.2	13.0	3.6:1
Sebe Young I	20	102.0	58.7	0.0	0.0	105.0	123.9	200.0	49.2	536.8	26.8	114.0	80.6	3.5	46.6	244.7	12.2	2.2:1
Chesterfield Glen	12	77.0	75.3	0.0	0.0	121.0	39.9	0.0	40.3	276.5	23.0	43.5	53.5	3.2	60.0	160.2	13.4	1.7:1
Thornridge Circle	32	137.5	0.0	0.0	0.0	0.0	113.9	0.0	94.0	207.9	6.5	196.1	173.8	15.0	62.6	447.5	14.0	1.2:2
Union/Miles Scattered	10	77.5	24.6	0.0	6.0	0.0	0.0	53.2	25.9	109.7	11.0	37.2	31.2	0.6	64.9	133.9	13.4	1.1:2
Garret Morgan	8	67.5	44.5	150.0	0.0	0.0	103.7	24.9	23.5	346.6	43.3	25.5	32.7	1.8	16.7	76.7	9.6	4.5:1
Total	200		1,071.8	1,117.0	396.0	454.5	419.1	830.5	833.8	5,122.7	25.6	973.2	943.7	73.6	570.8	2,561.3	12.8	2.0:1*

Note: Prices, costs, and benefits are in thousands of dollars.
*Average over all units.

Figure 2. Cost and Benefit by Line Item, Selected Projects, Cleveland

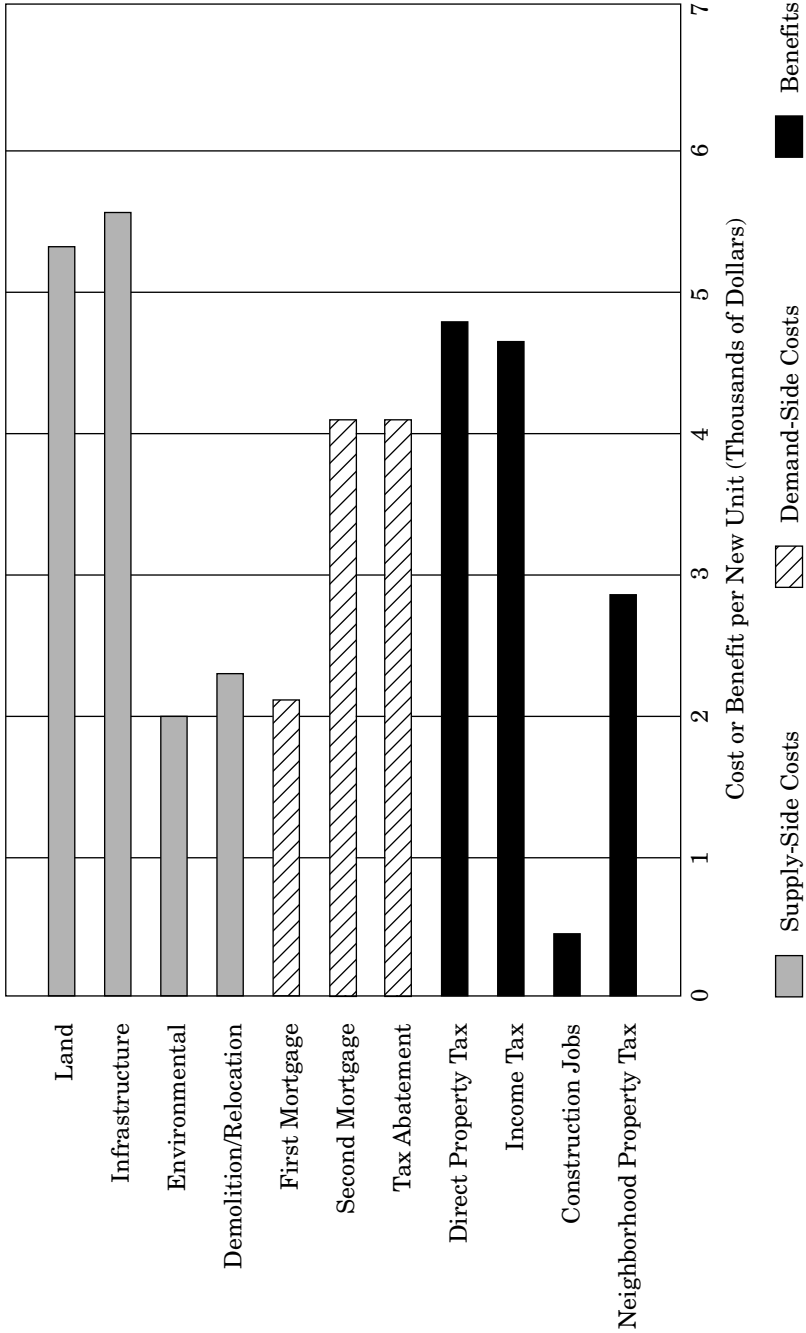
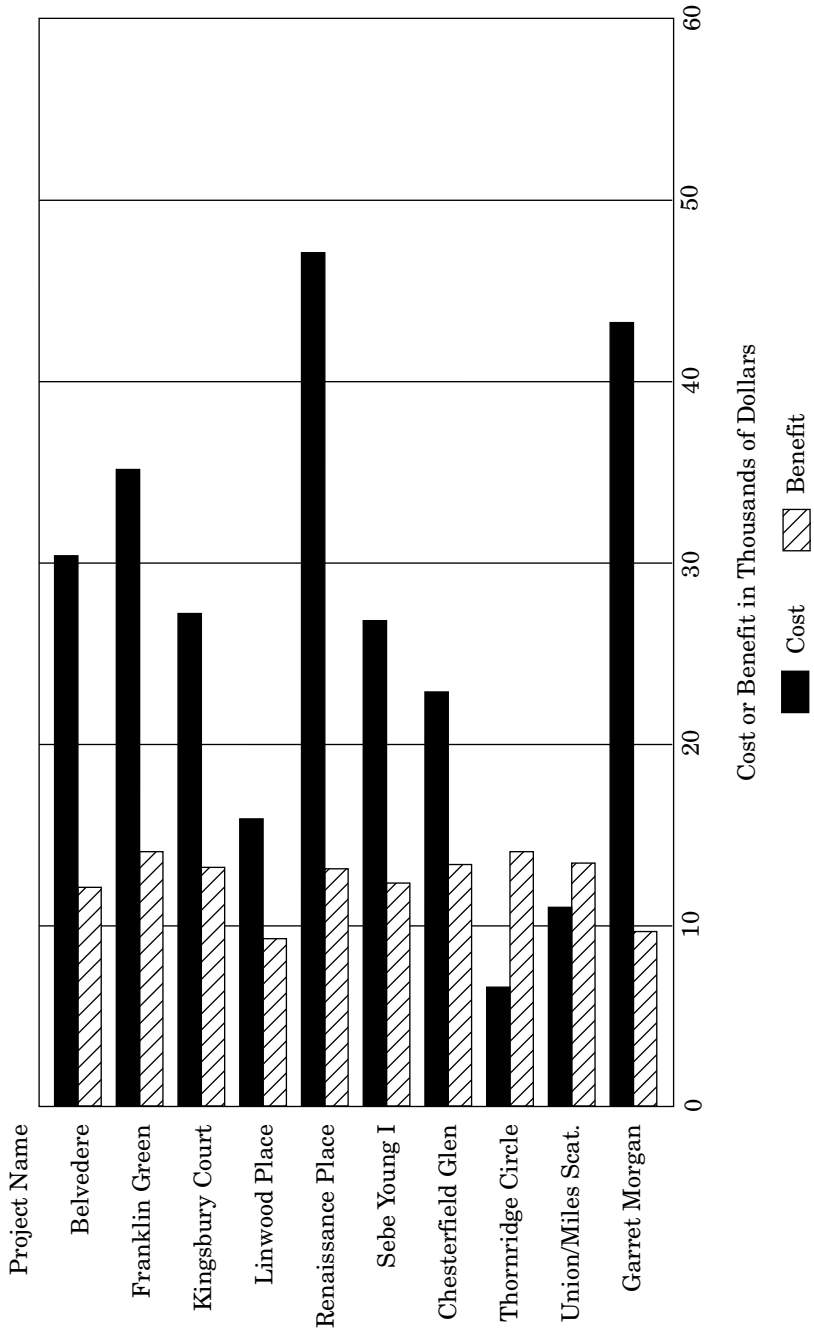


Figure 3. Costs and Benefits per Unit of New Housing Construction, Selected Projects, Cleveland



present value of \$973,200 would be derived from property taxes on the land during abatement and on the entire property after the abatement period (38 percent of all benefits). New residents' income taxes provided \$943,700 (37 percent of the total benefits). Increases in nearby home property taxes contributed \$570,800 (22 percent of the total). Finally, income from construction jobs yielded \$73,600 (3 percent).

Cost-benefit ratio

A cost-benefit ratio was calculated for each project. Ideally, the costs should be less than the benefits (less than a ratio of 1:1). Overall, the cost-benefit ratio for the 10 projects in the sample is 2.0:1. The ratios range from a high of 4.5:1 (the worst case) to a low of 1:2.2 (the best case). The two highest ratios originated from an affordable project and from one with prices well above market. Only two projects had ratios less than 1:1. The cost-benefit ratio calculated for the study excludes many important nonquantifiable or intangible benefits (e.g., benefits to residents from homeownership, removal of blight), as well as positive effects on other jurisdictions. Despite this caveat, the subsidy program for jump-starting new housing markets cannot yet be considered a success strictly on a cost-benefit basis.¹⁴ Still, because Cleveland appears to be the only city in the Midwest to have computed and published a cost-benefit analysis for housing subsidy programs, these figures may serve as a benchmark for comparative and future analysis. Further, the ordinal ranking of projected costs and benefits could be used by CD and other local housing subsidizers to rank and prioritize proposed housing projects.

Jump-starting's effect on new housing starts

The Cleveland jump-starting housing subsidy programs appear to be successful in generating new housing starts. In the five-year period before the subsidy programs were enacted in 1990, the number of one- and two-family housing starts authorized by building permits averaged 50. This figure increased to 63 units

¹⁴ An analysis was performed to test the sensitivity of the cost-benefit results to limiting property taxes paid to only the city. When property taxes paid to the school district and county after the end of the abatement period are considered (holding marginal costs to the district constant, e.g., children attend private school), the overall cost-benefit ratio improved to about 1.2:1. However, this ratio implies that the costs, although closer to benefits, still outweigh the benefits on purely fiscal grounds.

per year over the next three years (1990 to 1992) despite the national recession. In 1993, three years after the programs were initiated, the figure jumped to 158 units and then increased to 240 units by 1995, averaging 185 units per year, more than triple the pre-jump-starting program level. Thus, regardless of their efficiency, Cleveland's housing subsidy programs do appear to be having the desired outcome.

How Cleveland compares with other midwestern central cities

This section compares Cleveland's housing subsidy programs with those of five other midwestern cities: Buffalo, Cincinnati, Des Moines, Pittsburgh, and St. Louis. All have new housing construction programs with both supply-side and demand-side subsidies. Table 3 summarizes the types of subsidies used by each city and the years the housing programs were initiated. St. Louis, Pittsburgh, and Cleveland all provided menu-type subsidy programs, in which a broad range of subsidy options were available to developers. On the supply side, donated land was the most frequently used program. For example, in Buffalo and Cleveland 100 percent and 90 percent, respectively, of all housing units constructed since 1990 received subsidized land (surplus or tax-foreclosed lands donated to housing developers at nominal cost). Assistance with infrastructure and subsidy for demolition and relocation expense were also used by a majority of the communities. On the demand side, tax abatement was available and used by new housing buyers in all cities except Cincinnati. Property taxes on new improvements were abated for 3 to 15 years, with Des Moines (Belzung 1995) and Pittsburgh (Davin 1996) granting the shorter 3- to 5-year periods. Second-mortgage subsidies, available in the majority of the communities sampled, were used by at least 70 percent of developers in Cleveland, Buffalo, Pittsburgh, and St. Louis.

CDC involvement in each community depends on the degree of organization, the subsidy levels, and the funding used to stimulate new housing. Funding for housing subsidy programs came from (in order of importance) the CDBG, the general fund, bond issues, and the HOME program. Where the CDBG serves as the main source of funds, CDCs participate as nonprofit developers or are used as pass-throughs for private, for-profit developers. Therefore, CDC involvement is positively correlated with subsidy levels.

Table 3. Supply- and Demand-Side Subsidies for New Housing Construction, Percentage of Use for All Units in Selected Central Cities^a

City	Supply Side			Demand Side					Year Program Started
	Land Subsidy (%)	Demolition/Relocation (%)	Environmental Grants (%)	Infrastructure (%)	First Mortgage (%)	Second Mortgage (%)	Tax Abatement (%)	Closing Costs (%)	
Buffalo, NY	100	0	0	40	0	100	100	0	1985
Cincinnati, OH ^b	6	6	0	90	0	0	0	0	1987
Cleveland, OH	90	30	30	40	50	70	100	0	1990
Des Moines, IA	5	5	5	0	0	0	100	0	1960s
Pittsburgh, PA	75	25	90	25	50	90	100	0	1979
St. Louis, MO	75	2	75	5	0	100	100	100 ^b	1976

^a Percentages were developed by authors on reported information obtained through interviews with officials from each selected city (Buffalo: Lesniak 1995; Cincinnati: DiFabio Foote 1995; Cleveland: Resseger 1995; Des Moines: Belzung 1995; Pittsburgh: Davin 1996; St. Louis: Moushay 1995).

^b Central-city equivalent for one- and two-family units.

Some of the communities in the sample attempted to conduct cost-benefit analysis. For example, Cincinnati calculated the city would break even on most investments in new housing in 8 to 20 years. Costs were computed at \$14,500 per new unit subsidized, including land, infrastructure, and demolition (DiFabio Foote 1995). Buffalo and Des Moines looked at the benefits they would gain through property taxes, although no formal cost-benefit analysis has been performed.

A rough measure of the effectiveness of housing subsidy programs can be determined by comparing the dates when the housing programs were initiated in each city (table 3) with the number of new housing building permits issued. Like Cleveland, Buffalo showed a substantial increase in building permits (i.e., doubling) within two to three years after the new housing policies had been implemented. Cincinnati recorded a smaller increase the year of program inception. Because the programs started before 1980, it was not possible to observe the effects for Des Moines, Pittsburgh, and St. Louis. Having a subsidy program does not ensure sustained housing activity. Despite the availability of a wide menu of different housing subsidies, the number of one- and two-family housing starts in St. Louis averaged under 40 during the past five years (U.S. Department of Commerce 1989–94).

Policy implications of the Cleveland experience for housing subsidy programs

Cleveland's housing subsidy programs support both affordable and market-rate housing. As a result, Cleveland maintains more housing subsidy programs than most of the other midsized midwestern communities. In addition to the more regionally popular programs of tax abatement, subsidized land, and infrastructure, Cleveland also subsidizes first- and second-mortgage programs, environmental cleanup, and demolition and relocation expense. The lack of popularity for locally funded first-mortgage programs may mean that Fannie Mae and CRA encouraged sufficient private sector financing to alleviate capital market failure, or it could be attributed to the lower prevailing interest rates during the 1992–94 study period. One program Cleveland does not offer is subsidized closing costs for buyers. Also, Cleveland appears to have a very large CDC role, thereby providing housing developers with access to nearly all funding pools. It is not surprising that the average cost per lot of subsidizing new housing construction (\$25,600) exceeds the average per-lot benefits (\$12,800) by just under \$13,000. When jump-starting has

been completed in certain submarkets of the city, Cleveland may wish to cut back on subsidies and focus on strategically supporting part, rather than all, of the housing market.

Sustainability of the Cleveland program

Given the high cost of subsidizing new housing, the next issue is whether the program remains sustainable in the long run. Costs should be considered the constraining factor because most of the benefits would not be received until well into the future. If the average cost to the city per unit is generalized to the 22 projects with 480 units active at the time the study was conducted, the costs would reach over \$13 million. To meet Mayor White's original goal of 2,000 units a year, the city would need over \$54 million—more than the entire combined pool of funds available for community development in 1994. Considering the relatively low level of housing output in Cleveland (about 185 units per year over the past three years), the available funds would be exhausted well before desired housing output production is attained.¹⁵

Despite the city's publicly stated goal, this level of support does not appear to be sustainable in the long run. However, because subsidizing housing has become a high priority, more efficient ways of conveying housing assistance are appropriate. These include devising a subsidy budget for housing developers, creating a more proactive role for the city in developing and marketing buildable lots, limiting subsidies on specific projects that are less needy, and trimming tax abatement to a shorter period. The CD has also reorganized its office to be more accessible to housing developers.

Subsidy budget

To attract buyers away from the suburbs to the central city, land and housing values must be competitive. However, it may be possible to reduce costs once markets have been established. Hence, a subsidy budget would give developers the opportunity to collect a specified amount of subsidy per unit. This subsidy

¹⁵ This statement is intended to reflect the order of magnitude of the required funding shortfall. It does not consider other fiscal benefits to the city, the economic benefits of additional retail or community activity, the political opportunity cost of doing nothing, or the carrying costs to the city of maintaining land bank properties.

should be in whatever form most benefits a particular developer. The subsidy budget should be higher for developers who are investing in riskier “market-creating” projects that jump-start new markets, especially in targeted areas of the city. The subsidy should be lower for “market-sustaining” housing projects that follow, rather than set, market trends. For example, if market-creating housing projects used a subsidy allowance of up to \$20,000 per lot, this would still be lower than the existing subsidy levels of \$25,600 per lot. For market-sustaining projects, the subsidy should be limited to \$13,000 per lot (the approximate cost-benefit break-even point). A defensible scheme should consider evolving market conditions and existing housing sales prices.¹⁶

Comparison of supply- and demand-side effectiveness

Judging from the Cleveland experience, supply-side subsidies cost more than demand-side ones, but does this imply that demand-side subsidies are more efficient? We cannot draw that conclusion. However, supply-side subsidies necessarily are used to create available lands for redevelopment because they are aimed at curing the economic and functional obsolescence of inner-city lots through lot assembly and infrastructure. Lots as a factor in housing production are oriented toward developers and occur earlier in the housing development pipeline than do the demand-side subsidies that pertain to prospective buyers. Also, because supply-side subsidies represent out-of-pocket costs, their present value will likely be higher because they cannot be discounted as demand-side subsidies are.

Ready-to-build lots

One way to reduce overall subsidy costs while retaining lot availability would be for the city to provide lots directly to developers. Clean lots, assembled and ready to build on, could be a way for the city to recoup some of its land costs. This notion is consistent with Varady's (1990) concept of development-ready

¹⁶ Consider, for example, Cleveland's Franklin Green and Fulton Row projects. Franklin Green was a market-creating town house project with subsidy costs of about \$35,400 per unit and benefits of \$14,200 (cost-benefit ratio of 2.5:1). Fulton Row, an eight-unit market-sustaining housing project across the street, is being completed now with only tax abatement (and potentially second-mortgage) subsidies; its total subsidy costs of approximately \$10,000 per unit roughly equal project benefits.

lots. In our case-study interview process, we found that 9 of 10 Cleveland project developers expressed interest in ready-to-build lots and indicated they would pay an average of \$6,500 per lot, depending on its size and location. Lots could be sold through auction or other competitive bidding processes so that developers could buy groupings of lots. The city would recover part of the market value of lots in its land bank inventory through this process.

Tax abatement

One of the most popular demand-side housing subsidies is property tax abatement. Cleveland's property tax abatement periods normally last for 10 years but may extend up to 15 years for projects with at least 20 units. Our analysis shows that a cost-benefit deficit will result (over 30 years) in a 15-year tax abatement. Therefore, tax abatement periods should be reduced to 10 years for market-creating projects and 7 years for market-sustaining projects. This finding is consistent with Koven and Koven (1993), who found that five-year tax abatement sufficed to interest buyers, and with Pittsburgh's three-year abatement (Davin 1996). Further, Varady (1990) found that those moving from within (rather than from outside) the city were more likely to be interested in tax abatement, indicating the potential for limited net increase in housing demand.

Conclusions and future issues

New housing subsidy continues to be an important issue in urban centers across the United States. As the availability of federal resources declines in order to balance the budget, and other federal social policies aimed at the central city come under closer scrutiny, efficient use of federal and local funds could become even more important in deciding which housing policy goals should be pursued. This study provides a baseline for evaluating the efficiency of new housing subsidies. In Cleveland, fiscal costs appear to exceed fiscal benefits under plausible assumptions, implying that there could be more cost-effective ways to encourage upgrading housing stock.

Future research on new housing in Cleveland (and other cities) could look at costs and benefits of housing subsidy for new housing and rehabilitation, including benefits that are not so apparent as the ones used for this analysis. Any such research should look more carefully at the benefits to the neighborhoods

surrounding new housing projects to determine how far the effect extends and whether it varies with the size of residential projects. Benefits could also be measured in terms of an increase in sale prices of new housing and the number of building permits issued.

In the context of subsidy tradeoffs in a fiscally restrained environment (e.g., comparing housing subsidies with other potential public investments), city policy makers need to decide between addressing the needs of several competing market segments within the housing user spectrum. The cost-benefit ratio of new construction should be compared with that of older housing unit rehabilitation to determine which approach is more efficient. Although the net benefits of housing rehabilitation are probably smaller, their costs may be also lower, potentially yielding a more favorable cost-benefit ratio. On the other hand, the political benefits gained from new construction are much more apparent than those from rehabilitation, which is consistent with Cleveland's new construction goals.

On the equity (fairness) side, policy makers should weigh the political and fiscal advantages of attracting middle-income residents back into the central city by supporting market-rate housing against those of focusing on upgrading the housing of existing city residents (many of whom have lower incomes) by subsidizing rehabilitation and affordable housing programs. The latter strategy has the disadvantage of not increasing the city's fiscal and economic base and could lead to abandonment of less desirable housing units in a soft market. Whatever path is chosen, housing planners should base their decisions on economic rather than political factors.

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