

RESEARCH REPORT

The East Baltimore Development Initiative

A Long-Term Impact Evaluation of a Comprehensive Community Initiative

Brett Theodos
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Contents

Acknowledgments	iv
The East Baltimore Development Initiative	1
Background	2
A Literature Review of the East Baltimore Development Initiative and Neighborhood Context	5
Methodological Approach	20
Data and Outcome Measures	24
Results	25
Discussion	41
Notes	50
References	52
About the Author	56
Statement of Independence	57

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The East Baltimore Development Initiative

In seeking to transform disinvested areas, comprehensive community initiatives have constructed apartment buildings, financed small businesses, organized residents, offered tax breaks, paved streets, rehabilitated art centers, financed charter schools, provided workforce training, and more—all to promote physical and social revitalization.

The use of “comprehensive community” (or “place-based” or “community revitalization”) initiatives has grown in recent years (Ferris and Hopkins 2015; Kubisch et al. 2010). The intellectual origins of place-based development efforts date back at least to the 19th-century settlement house movement, but the federal government’s involvement in place-based programs started with the public housing program in the 1930s. That program was followed by urban renewal, which was authorized by the Housing Act of 1949 (Martinez-Cosio and Bussell 2013; Mossberger 2010; Von Hoffman 2012). Successive administrations have put their own stamps on a federal approach to local revitalization—from President Johnson’s Model Cities and President Nixon’s Community Development Block Grant (CDBG) to President Clinton’s Empowerment Zones. The Obama administration embraced a place-based paradigm to policymaking, rolling out Choice Neighborhoods; Promise Neighborhoods; Strong Cities, Strong Communities; Byrne Criminal Justice Innovation; and Promise Zones. And President Trump signed Opportunity Zones into law as part of the Tax Cuts and Jobs Act of 2017 (Theodos, Hangen, Gonzalez, and Meixell 2020).

It would be a mistake to conceptualize comprehensive community initiatives as principally federal in nature, however. Although they often use federal funding, local public officials and philanthropic and anchor institutions are the backbone organizations that execute comprehensive place-based approaches (Kubisch et al. 2010). Large national foundations may backstop local capacity, and most such philanthropies have developed signature revitalization initiatives during the past three decades. But even when initiated from afar, comprehensive community initiatives take on a local flavor.

Like the dangers of Scylla and Charybdis that Odysseus had to thread his way between, place-based revitalization work has faced two opposing pitfalls. On the one hand, initiatives might do too little to alter the status quo, leaving neighborhoods as impoverished as when they began, with the added insult of broken promises and a sense of intractability. This disbelief in change may take hold among residents or among outside observers, such as high-ranking officials in city government,

philanthropy, or anchor institutions. Too little change might be observed because the initiative deploys too few resources relative to the need or because it deploys resources in the wrong way.

If the one danger is that community revitalization initiatives have too little effect, the opposing danger is that they have too much of an effect. It is possible that a revitalization initiative improves a neighborhood so much that it stimulates market interest in a way that takes over and crowds out households with low and moderate incomes that had been living in the area for years. Households may or may not have been relocated directly because of the initiative, but when it takes hold, the danger is that a revitalized neighborhood becomes a gentrified one and that the households originally intended to benefit from the initiative no longer can.

What, then, of actual initiatives and their effects? What can be said about how they have performed? Although the prevalence of these efforts has grown, our knowledge of their effects has not grown commensurately. Like the communities they seek to change, comprehensive community initiatives are complex and have proved difficult to evaluate.

This study uses a new analytic technique, the synthetic control method, to understand one of the nation's largest, longest-standing, and most prominent comprehensive community initiatives: the East Baltimore Development Initiative. The study researches whether the initiative caused observable changes to its project area in population levels, racial and ethnic composition, incomes, poverty rates, college degree holders, housing tenure, and property values.

I find that the East Baltimore community, relative to a comparison, initially resulted in significant population decreases but now has equivalent population levels to that comparison counterfactual. The neighborhood did not experience change in its racial composition as a result of the initiative. Rates of bachelor's degree holders are trending up for the community but are not yet statistically significant. It does appear that the intervention resulted in increased average monthly rents relative to the counterfactual and lower homeownership rates (higher rental rates). Incomes, poverty rates, and home values were not changed relative to the counterfactual. Although it is valuable to understand from this neighborhood-level research how aggregate community economic, housing, and demographic factors changed, future studies should build from this place-specific analysis to investigate any person-specific impacts of the intervention.

Background

Considerable research has assessed the impacts of the broader suite of community development efforts, including housing programs, traditional community development programs, and economic development programs. That community development evaluation literature uses several methods,

such as regression discontinuity analysis (Baum-Snow and Marion 2009; Bostic and Lee 2018; Deng and Freeman 2011; Freedman 2015). Several community development evaluations use adjusted interrupted time series, which sometimes use hedonic regressions (Galster, Tatian, and Accordino 2006; Galster et al. 2004; Reynolds and Rohlin 2015; Schwartz et al. 2006; Zielenbach and Voith 2010). The literature also includes more conventional difference-in-differences approaches, which are also sometimes used in hedonic regressions (Ellen et al. 2007; Richardson et al. 2017). The synthetic control method has not been used to evaluate a community development initiative.

BOX 1

Comprehensive Community Initiatives

I define a comprehensive community initiative as an approach that is funded in part by external sources but relies on local knowledge and resources. It seeks to upgrade, over a sustained period, one or more specific features of the physical or social environment of a distressed area in a way that is measurable and for which the benefits are anticipated to accrue, at least in part, to residents living in the area before the intervention.

Definitions can be deceptively simple, however, whereas reality is more nuanced. It is helpful to expand on what this definition does and does not include. First, there must be a targeted neighborhood or neighborhoods. Second, there must be local involvement in planning and implementation. Third, activities, expenditures, and services must be made available beyond the status quo. Spillover effects can exist, but the activities must have an element of spatial concentration and targeting. Fourth, there must be a sustained commitment over time, typically at least 3 years but often 10 or more. Fifth, though not required, comprehensive community initiative strategies are typically multifaceted and multisectoral. Sixth, these strategies make claims on changing the target area in one or more ways: poverty alleviation, crime reduction, beautification, business growth, and public health gains are a few common examples. Such changes are, or at least could be, measured at the community level and are not simply upgrading an individual property or producing gains for the client base of an existing service provider.

Depending on who is doing the classification, between one dozen and three dozen such initiatives have been launched across the US.^a The most prominent examples include Atlanta's East Lake Initiative, Baltimore's East Baltimore Development Initiative and the Sandtown-Winchester Neighborhood Transformation Initiative, Boston's Dudley Street Neighborhood Initiative and Higher Ground Boston, Chicago's New Communities Program, the Cleveland Community Building Initiative, Los Angeles's Best Start LA, New York City's Harlem Children's Zone and Comprehensive Community Revitalization Program in the Bronx, San Diego's City Heights Initiative, and San Francisco's HOPE SF initiative. In addition, there are a few cross-site efforts, such as the Ford Foundation's Neighborhood and Family Initiative and the Annie E. Casey Foundation's Making Connections initiative. The Choice and Promise Neighborhoods program sites present interesting cases, where it is likely that some will be able to claim changing broader community dynamics.^b

^a James M. Ferris and Elwood Hopkins, "Place-Based Initiatives: Lessons from Five Decades of Experimentation and Experience," *The Foundation Review* 7 no. 4 (2015): 97–109; Anne C. Kubisch, Patricia Auspos, Prudence Brown, and Tom Dewar, *Voices from the Field III: Lessons and Challenges from Two Decades of Community Change Efforts* (Washington, DC: Aspen Institute, 2010); Maria Martinez-Cosio and Mirle Rabinowitz Bussell, *Catalysts for Change: Twenty-First Century Philanthropy and Community Development* (New York: Rothledge, 2013); and Margery Austin Turner, Peter Edelman, Erika Poethig, and Laudan Aron, *Tackling Persistent Poverty in Distressed Urban Neighborhoods: History, Principles, and Strategies for Philanthropic Investment* (Washington, DC: Urban Institute, 2014).

^b Rolf Pendall, Leah Hendey, David Greenberg, Kathryn L.S. Petit, Diane Levy, Amy Khare, Megan Gallagher, et al., *Choice Neighborhoods: Baseline Conditions and Early Progress* (Washington, DC: US Department of Housing and Urban Development, 2015).

I distinguish comprehensive community initiatives (box 1) from the broader set of community development programs like the Community Development Block Grant or the New Markets Tax Credit (NMTC) Program. The literature evaluating community development programs is voluminous, but the literature pertaining to comprehensive community initiatives is limited, especially with regard to quantitative impact analysis.

Relatively more is written about implementation and lessons learned. Included are studies on the Annie E. Casey Foundation's Making Connections initiative (AECF 2013), the Enterprise Foundation's Sandtown-Winchester Neighborhood Transformation Initiative (Brown, Butler, and Hamilton 2001), the Ford Foundation's Neighborhood and Family Initiative (Chaskin, Chipenda-Dansokho, and Toler 2000), the Hewlett Foundation's Neighborhood Improvement Initiative (Brown and Fiester 2007), the MacArthur Foundation's New Communities Program (Greenberg et al. 2014), the New York Community Trust's Neighborhood Strategies Project (Auspos 2000), and the Surdna Foundation's Comprehensive Community Revitalization Project (Miller and Burns 2006).

The impact literature is not well populated. It includes a study by Rosenblatt and DeLuca (2017) documenting the failure to bolster Sandtown-Winchester. Other studies look at approaches that some have termed "comprehensive community initiatives," but these efforts are different from the initiative studied here in that they seek to address larger spatial areas, such as entire cities or school districts (Collins, Johnson, and Becker 2007; Weitzman et al. 2009).

A review of the literature indicates that collectively, the successes of these efforts have been mixed. For some observers, engaging community residents is a sufficient measure of success. But most community-building efforts are undertaken to improve the economic and social vitality of distressed communities. By these measures, many efforts have fallen short, though some have succeeded (Kubisch et al. 2010).

A Literature Review of the East Baltimore Development Initiative and Neighborhood Context

The East Baltimore Development Initiative is a large, multiyear, and multiservice effort (table 1). It has been led by a well-resourced organization, East Baltimore Development Inc. (EBDI), that has secured support across successive mayoral and gubernatorial administrations. EBDI has made investments in both human services and in physical redevelopment. As part of the initiative, EBDI relocated a substantial number of residents and demolished housing to make way for new development, which has led to enduring criticism (more so than for comparable initiatives). The initiative developed or supported real estate for housing, education, retail, and community facilities, such as recreational options. EBDI started and incubated a public school, drawing on the expertise and resources of the Johns Hopkins School of Education and philanthropic support. The initiative is closely intertwined with a local public school. Since 2003, the initiative has directly invested or leveraged well over \$1 billion into the Middle East neighborhood, with contributions from philanthropy, government, and private market debt and equity financing.

TABLE 1
Summary Design Features of the East Baltimore Development Initiative

Design feature	East Baltimore Development Initiative
City and state	Baltimore, MD
Lead organization	East Baltimore Development Inc.
Start year	2003
End year	Ongoing
Amount directly invested or facilitated	>\$1 billion
Emphasis of approach	Real estate for residential, commercial (including hotel), and community facilities; public schools; inclusion contracting; resident services
Scale of physical redevelopment relative to neighborhood size	Near total demolition and new construction
Investment in human services	Robust relocation services, few ongoing other directly provided services

The next subsection introduces the Middle East neighborhood/Eager Park where EBDI has been active. A discussion of the redevelopment effort follows. Next is a description of the initiative’s key components, and the final subsection looks at recent adaptations of the effort. These sections draw from a review of published literature, with original research findings following in the Interim Outcomes section.

The Middle East Neighborhood/Eager Park

Middle East Baltimore sits north and east of downtown, immediately north of the Johns Hopkins medical campus. It is also referred to as Eager Park, especially the portions redeveloped by EBDI.

The community has faced systems-level exclusions and racial discrimination. In 1911, Baltimore became the first city in the nation to adopt an ordinance preventing Black people from living in certain neighborhoods. When the US Supreme Court ruled those approaches unconstitutional in 1917, the city government and white power structures turned to other means.¹ Segregation was pursued through networks (especially realtors), harassment and violence, race-based deed covenants, and the use of eminent domain-type approaches. These strategies were reinforced by race-based exclusions built into the federal Home Owners' Loan Corporation, which resulted in redlining, making it difficult for Black people in Baltimore to access home loans. The Home Owners' Loan Corporation gave the Middle East neighborhood the lowest rating: Hazardous.²

As a result of this disinvestment and the community's proximity to downtown, East Baltimore and the Middle East community specifically have long been discussed as an area in need of revitalization (Stoker, Stone, and Worgs 2015). East Baltimore is a community that is in many ways prototypical of northeastern and midwestern urban disinvestment and decline. Once mostly comprising immigrants from Eastern Europe and their descendants, notably Czechs, Poles, and Lithuanians, the area transitioned to become majority Black. The community was a location for Black workers at Bethlehem Steel, one of the largest steel mills in the world, located south of the city. The plant employed 35,000 at its peak in 1959 but employed just 2,000 when it closed in 2012.³

In this way, the Middle East community mirrored trends within the larger city, which saw its population decline from 949,708 in 1950, when it was the nation's 6th-largest city, to 585,708 in 2020, when it was the 30th largest. Thanks to an out-migration of white households, during the 1970s, Black people came to compose the majority of the city's residents. Baltimore, once a manufacturing and shipping hub, now has Johns Hopkins University as its largest employer. Unlike some other postindustrial cities, Baltimore has attracted few immigrants.⁴

In looking at the EBDI project area, we see a community that experienced a dramatic depopulation even before redevelopment. Some movement was caused by so-called slum clearance efforts (Pietila 2018), though others were caused by disinvestment and families' choosing to move away. In 1970, the community had about 37,000 people per square mile. That number dropped by over half to fewer than 17,000 people per square mile in 2000 (table 2). As a result, vacancy rates were very high by 2000, at over 30 percent. Owner occupancy was low at 18 percent. Home values in 2000 were strikingly low at roughly \$40,000 (in 2017 dollars). Average household incomes were approximately \$40,000 as well, the poverty rate was 48 percent, and the unemployment rate 24 percent (that in a year in which the nationwide poverty rate was 11 percent and the unemployment rate was 5.8 percent). The crime rate locally was twice the city average, and lead poisoning rates

were among the highest in Baltimore (AECF 2011b). Thanks to easy access by car, the area was a major location for drug sales for those from the city and even the region (Linton et al. 2013). Infant mortality was the highest in the state.⁵ Although these statistics can convey many disadvantages for those in the neighborhood, those with neighborhood experience also point to the residents' many strengths and resiliency in the face of an inhospitable contextual and policy environment (Gomez 2013).

TABLE 2
East Baltimore Development Initiative Project Area Demographic, Economic, and Housing Conditions, 1970–2000

	1970	1980	1990	2000
Population, age, and family type				
Population density	37,439	29,733	25,819	16,650
Population younger than 5	9%	10%	12%	9%
Population older than 65	9%	10%	10%	9%
Race or ethnicity				
Asian, Native Hawaiian, and other Pacific Islander	0%	0%	0%	0%
Black	95%	97%	98%	96%
Latino	1%	2%	0%	0%
White	4%	1%	2%	2%
Foreign born	1%	0%	1%	0%
Education and economics				
Bachelor's degree or higher	2%	3%	4%	5%
Household income (average)	\$35,931	\$30,707	\$42,244	\$39,987
Unemployment rate	8%	18%	13%	24%
Poverty rate	40%	44%	40%	48%
Housing				
Owner occupancy	13%	13%	14%	18%
Vacancy rate	15%	17%	19%	31%
Value of owner-occupied home (average)	\$34,572	\$43,435	\$47,110	\$40,323
Gross monthly rent	\$389	\$589	\$681	\$576

Sources: 1970, 1980, 1990, 2000 Decennial Censuses.

Note: Dollar values are adjusted for inflation and reported as 2017 values.

Redeveloping Middle East Baltimore

Before redevelopment began, the challenges experienced by those in the Middle East neighborhood stood juxtaposed with their close neighbor, one of the world's top-ranked, best resourced, and most sophisticated hospitals. EBDI was not the first effort to redevelop the area. Indeed, the East Baltimore Development Initiative was designed in response to a shared sense that previous, incremental redevelopment efforts were unsuccessful. The most immediate predecessor to the East Baltimore Development Initiative was led by the Historic East Baltimore Community Action Coalition. Johns Hopkins University and city, state, local, and community leaders founded the coalition in 1994 to administer the federal Empowerment Zone funds awarded to the city (Hummel

2007). But from 1995 to 2000, the number of vacant homes in the area doubled to 4,000, while the coalition renovated just 47 rowhouses, 10 percent of what was pledged.⁶ Also in the background was the shared sense that the Enterprise Foundation–led Sandtown-Winchester community development project had also failed, most notably because it did not sufficiently engage or attract private market capital.⁷ A more robust, comprehensive, and market-oriented approach was envisioned.

In 2003, several partners formally created EBDI to lead the East Baltimore Development Initiative.⁸ EBDI is seeking to revitalize 88 acres of East Baltimore. EBDI is a quasi-governmental organization structured as a 501(c)(3) nonprofit. It is governed by a board composed of individuals from the city, local philanthropy, higher education, the corporate sector, and community representatives. The biggest institutional players in the East Baltimore Development Initiative have been Johns Hopkins University, the Annie E. Casey Foundation, the Weinberg Foundation, the Forest City–New East Baltimore Partnership (the area’s master developer, now acquired by Brookfield Properties), the city (to include the school district), and the State of Maryland. Other partners include the Goldseker Foundation, the Abell Foundation, the Greater Baltimore Committee, and ReBuild Metro.

The EBDI project area is shaped like a grand piano. Mostly made up of the historic Middle East neighborhood, rebranded as Eager Park, it is bounded on the west by N. Broadway, on the south by E. Madison Street, on the east by N. Patterson Park Avenue, and on the north by Amtrak rail tracks. The area sits just north of Johns Hopkins medical campus, which includes the hospital as well as the schools of public health, medicine, and nursing, and several other facilities.

EBDI was designed to operate outside public-sector control and scrutiny (Stoker, Stone, and Worgs 2015). In addition, it was believed a quasi-governmental organization could be both nimbler and more enduring. A high share of Baltimore’s neighborhoods are disinvested (Theodos, Hangen, Meixell, and Foster 2020), so many areas could have been selected for redevelopment. But the city was fiscally constrained, so not many areas could have been prioritized for redevelopment concurrently. Given its institutional and fiscal weaknesses, the city was not in the position of leading redevelopment efforts in any coordinated or expansive way (Stoker, Stone, and Worgs 2015). Anchor institutions and philanthropy filled in but they have been unable to achieve economic or population growth in many Baltimore neighborhoods.

Although not initially conceiving the idea, the Annie E. Casey Foundation agreed to join the initiative on the condition that it was recast not just as economic development but as community building and human capital development (AECF 2011b). In that sense, the East Baltimore

Development Initiative did not begin as a comprehensive approach; rather, it evolved into one in response to resident concerns and as a requirement of the Annie E. Casey Foundation's participation (Stoker, Stone, and Worgs 2015).

The first step for the initiative, at least in how it directly affected residents, was relocation. This was also the most controversial element of the effort. To engage locally, the board of EBDI created a Housing and Relocation Committee that met monthly with 15 to 40 residents (AECF 2011b); it also created a Policy Subcommittee of the Housing and Relocation Committee. By 2011, EBDI had held nearly 400 meetings with residents on issues related to relocation, services, and data collection (AECF 2011b), which the foundation characterizes as constructive with resident input welcomed and incorporated. In addition, a local councilperson led a Community Advisory Board that met regularly between 2003 and 2006. (A detailed description of relocation compensation and services provided by EBDI is provided below.) Beyond engagement around relocation, EBDI's work included soliciting input into the master design, into planning for the school, on economic inclusion goals and processes, and for a resource center and services. Two community members were on the EBDI board.

Although some residents engaged in and supported the initiative, others formed a group—the Save Middle East Action Committee—to oppose the redevelopment effort. The group also received financing from the Annie E. Casey Foundation, which supported residents' having an independent voice (Stoker, Stone, and Worgs 2015).

Homeowners were initially offered \$50,000 to \$70,000 depending on where they moved. In response to community advocacy, that amount was later standardized and raised (Hummel 2007). In doing so, Hummel (2007, 39) believes, "EBDI has shown a true ability to genuinely listen to residents of East Baltimore who are most affected by the urban renewal project and display a flexibility to amend its policies to craft a fairer process." The Annie E. Casey Foundation agrees, writing that EBDI "involves residents in a consequential way in planning, design, and implementation" (AECF 2011a, 1). Gomez (2013), a local advocate, disagrees, asserting that EBDI only provided for residents in the face of their collective organization and advocacy.

The redevelopment was likely also controversial because of Johns Hopkins's efforts over previous decades. They included a 1950s redevelopment that resulted in the displacement of more than 1,000 households. Johns Hopkins had also bought up some properties in the area, leaving homes vacant and boarded up for years (Skinner 2009). Those were a small share of the neighborhood's vacant housing; however, some local advocates asserted that Johns Hopkins was deliberately undermining the neighborhood (Gomez 2013).

How have residents fared in the process? Full insights are unavailable. But the Annie E. Casey Foundation commissioned researchers to track residents and their experiences with relocation—which is information that is not typically available for relocation efforts. The work, completed by Abt Associates, found residents were generally satisfied with their new homes and neighborhoods. For example, 80 percent of residents reported their overall quality of life as being a bit or much better, with 88 percent feeling that way about their home and 88 percent also feeling that way about their new neighborhood (table 3). A higher share of residents was concerned about housing costs and their personal financial condition, with roughly one-quarter (24 percent) reporting they were a bit worse or much worse off. A local advocate responded that regardless of some positive feelings about moving, most residents were not given the choice about relocating and the experience was stressful (Gomez 2013).

TABLE 3
Resident Self-Assessment of Well-Being after Relocation under the East Baltimore Development Initiative

	Much better (%)	A bit better (%)	Same as before, no change (%)	A bit worse (%)	Much worse (%)	Don't know/Not applicable (%)
Overall quality of life	44	36	12	1	4	3
New home	69	19	3	4	4	3
Monthly housing cost	43	15	12	12	12	7
Personal financial condition	27	28	18	10	14	3
New neighborhood	58	30	4	4	1	3
Neighbors	42	36	11	4	3	5
Children's school	31	11	9	2	0	47

Source: Abt Associates, “EBDI Post-Relocation Satisfaction Survey: Highlights and Key Findings,” November 8, 2005.

Notes: Numbers may not sum to 100 percent because of rounding. The survey was attempted for relocated households as of June 30, 2005, and was fielded August 2005. The survey achieved a 56 percent response rate.

In addition to the quantitative tracking studies of those affected by the initiative, Linton and coauthors (2013) fielded a qualitative study of 25 area residents who had a history of injection drug use. The study found that “few respondents had opinions on the impact of the current urban redevelopment strategy that were solely good or bad” (608). Generally, residents liked the neighborhood being cleaner, with less trash and vacancies. Fewer opportunities existed for selling sex and drug use in abandoned buildings, which some reported resulted in fewer temptations to use drugs. Residents noted that the initiative resulted in the movement of several open-air drug markets, which made them feel safer and helped reduce violence. Residents appreciated that they had a right to return. Residents also had complaints, including that they had to leave even if they did not want to. And some felt the redevelopment was resulting in higher rents. Some believed their social ties had been disrupted, though others did not. Some felt that increased security meant that they were less free to congregate (Linton et al. 2013).

Key Components of the East Baltimore Development Initiative

The East Baltimore Development Initiative has five main elements: (1) office, commercial, and recreational development; (2) housing development; (3) inclusion contracting; (4) employment and workforce training; and (5) education. Compared with other comprehensive community initiatives, EBDI has principally focused more on real estate-based investments than on human services-based investments (Theodos 2022a, 2022b).

OFFICE, COMMERCIAL, AND RECREATIONAL DEVELOPMENT

At full build-out, the East Baltimore Development Initiative is expected to generate 1.6 million square feet of commercial lab and office space.⁹ The effort was initially designed to attract biotechnology facilities, inducing spillover benefits in local residential and commercial markets. After a slowdown during the Great Recession, the initiative pivoted and placed greater emphasis on investments in developing commercial and community facilities.

The first lab building, the John G. Rangos Sr. Life Sciences Building, opened in 2008, with Johns Hopkins's Institute for Basic Biomedical Sciences as the anchor tenant. Also in the building are several retail spaces: a 7-Eleven, a Harbor Bank branch, a fast-casual restaurant (Kabobi), and a sit-down restaurant (Atwater's). As evidence of the steps needed to attract development, Johns Hopkins University committed to three years of catering orders for Atwater's, the only way the owner would agree to locate at the site (Bonds, Burnett, and Sissman 2018).

By 2011, the initiative came under criticism for a sluggish development pace and for pivoting away from its biotech focus, most notably in a five-part series in the *Daily Record*.¹⁰ Development had slowed and nearly stopped during the Great Recession. As evidence of the time taken by large urban revitalization projects, by 2018, EBDI was still just 60 percent complete, though it has picked up pace of late and half a dozen projects are under way.¹¹

In 2011, the Johns Hopkins Berman Institute of Bioethics moved into a renovated 19th-century police station at 1809 Ashland Avenue. A second large lab building was the Maryland Public Health Laboratory, part of the state's Department of Health, which opened in 2014 and fully occupies the 230,000-square-foot building. A third lab building, supported by the NMTC Program, opened in 2016 at 1812 Ashland Avenue. It houses Johns Hopkins Technology Ventures and the Fast Forward tech start-up-to-market incubator and accelerator. A Starbucks opened in a ground-floor retail space in the building in 2017. The coffee shop was one of the company's handful of locations that included job training for teens and young adults who are not employed or in school, an in-store classroom, and an effort to purchase from minority-owned contractors and suppliers.¹²

In seeking to diversify the area's land uses, EBDI has initiated several other projects. In 2013, EBDI opened a 1,490-space multistory parking garage that also contained a Walgreens. It was Maryland's first "Well Experience" store, with an in-store clinic staffed by nurse practitioners.¹³ Johns Hopkins is a 50 percent owner of the Walgreens store—the only way Walgreens would agree to open in that location (Bonds, Burnett, and Sissman 2018). EBDI—working with one of the minority equity partners of Forest City–New East Baltimore Partnership—developed a 15-story, 200,000-square-foot Marriott Residence Inn. The facility, which opened in 2017, has ground-level retail, including a Verizon store, Fulton Bank, Tropical Smoothie, Charleys Cheesesteak, and 1000 Degrees Pizza. Also in the project area is the Maryland Institute College of Art's community arts program, which is located in a historic firehouse owned by EBDI.

In addition to these buildings, EBDI built a five-acre greenway, Eager Park, which opened in 2017. The park has been the site of community festivals and exercise classes. In support of these projects, EBDI has undertaken the public infrastructure in the project area, which includes new roadways, water lines and sewers, lighting, sidewalks, and trees.

HOUSING DEVELOPMENT AND RELOCATION COMPENSATION AND SERVICES

A second area of focus is the construction of affordable and market-rate housing. Most controversially, this effort involved the relocation of 742 households living in the project area.¹⁴ Most of those living in the project area had to move. Residents were given a first opportunity to return, which included a first opportunity to apply for the new housing built in the neighborhood. It also included a monetary benefit to assist with closing costs, application fees, and moving expenses. Relocated residents are still returning to the neighborhood, for example, in some of the new rowhouses,¹⁵ though many have not returned.

In its relocation efforts, EBDI sent notices, hosted educational meetings, and provided "family advocates" before, during, and for five years after relocation to help residents manage the disruption of moving (AECF 2011a; Hummel 2007). The family advocate worked with households to provide case management services. Services included creating support plans and referring or linking residents to workforce training, job placement, child care, financial counseling, and senior and youth services. An attorney was also on hand to help resolve housing, estate, and lending issues. Residents were entitled to three appraisals (the third paid for by the Annie E. Casey Foundation). At that point, they met with a relocation counselor to get oriented to their benefits and rights and to find a home. EBDI arranged tours for residents of other communities (AECF 2011b). It worked to ensure that most residents were not required to relocate multiple times (AECF 2011b).

For involuntary relocation, residents were financially compensated. Relocated homeowners in phase 1 received an average of a \$122,000 replacement housing payment—moving into homes roughly five times the value of the properties they had left, which appraised for \$30,000 on average (AECF 2011b). Renters could either receive a fixed payment or a housing choice voucher. Phase 1 renters received on average \$38,000. Phase 2 homeowners initially occupied homes in the project area with values of on average \$50,000 and were helped in buying new homes worth on average \$190,000, with an average replacement housing payment of \$125,000. Phase 2 renters received on average \$1,000 (AECF 2011b). EBDI also provided closing cost help of up to \$5,000 and security deposits of up to \$2,500. EBDI agreed to pay the full difference between residents' old and new property taxes for the first year and 50 percent of the difference for the second year (Hummel 2007). Resident input, mobilization, and pressure helped shape the relocation processes and package.

In response to resident concerns about the health effects of demolition, EBDI agreed to delay demolition until almost all residents in the project area were relocated, which slowed the process (AECF 2011a). EBDI's "Good Neighbor: Responsible Demolition" protocols included (1) advance notification, (2) adequate fencing, (3) advance removal of high-lead components, (4) training, (5) "picker" rather than wrecking ball demolition, (6) water spraying to reduce dust, (7) postdemolition street and sidewalk cleaning, (8) postdemolition topsoil removal, (9) the provision of high-efficiency particulate air vacuums and mats to remove dust on shoes, and (10) independent contaminant testing (AECF 2011a). Some of these elements—advance notice and use of water to suppress dust—were later adopted citywide.

As the initiative progressed, EBDI changed its strategy to allow families that wanted to remain in the neighborhood to do so, though this was after most residents had been relocated. EBDI created a home repair program, which allowed homeowners to rehabilitate their homes using their relocation benefits. Following suggestions made by residents participating on the Policy Subcommittee, EBDI also created the House for a House program, whereby homeowners living on blocks slated for demolition sold their homes, purchased a home on a block slated for historic preservation, and renovated the home using their relocation benefits. (The Maryland Historical Trust required a certain number of houses to be preserved in the project area, rather than being demolished.) As of 2011, roughly 40 households had participated in these two programs (AECF 2011b).

During a resident-engaged planning process in 2005–06, EBDI developed a new housing plan that articulated a mix of affordability: one-third of the units would be affordable to low-income households, one-third would be affordable to moderate-income households (sometimes referred to

as workforce housing), and one-third of the units would not be priced at market rates. Responding to resident concerns, EBDI made the commitment that the first housing to be constructed in the project area would be affordable. EBDI has been working to rebuild housing in place of the demolished units. Parkview at Ashland Terrace, an affordable development with 74 senior apartments, opened in 2007, as did Ashland Commons, an affordable development with 78 apartments. Chapel Green followed in 2009 with 63 mixed-income apartments and townhouses. All three were supported by state-controlled allocations of federal Low-Income Housing Tax Credits. As of 2011, 36 households from the project area had moved back into the first affordable developments (AECF 2011b).

After these affordable developments, EBDI moved to complete a market-rate building. The largest residential development in the project area is 929 Apartments, an apartment building with 321 units for graduate student housing. To make the project viable, Johns Hopkins purchased the land and leased it to EBDI, which also gave the property tax-exempt status. The project also included a contribution payment in lieu of taxes.¹⁶

Additionally, EBDI has overseen the development of several rowhouses and townhouses in the project area. One of them is Preston Place, an ownership and rental townhouse redevelopment of 48 units at the northern end of the community. Half the units were added in 2015 and half in 2018–19; they include market-rate and affordable units. One of the recent higher-profile developments in the project area was the construction of 49 market-rate townhouses called Townes at Eager Park (formerly Windemere), which are bound by McDonough Street, Eager Street, and Rutland Avenue. Most of these homes were purchased by Johns Hopkins University employees. The university provided a \$36,000 buy-near-your-work incentive, with the homes selling out in a day. Their base price was \$250,000—well above the area’s historic purchase prices. Another 34 townhouses are now under development, with an intended list price of \$300,000. In addition, 10 rehabbed rowhouse units along McDonough Street opened in 2018.¹⁷ Three rehabbed rowhouses opened on N. Washington Street across from Chapel Green. Eager Park West, a mix of 25 market-rate and affordable units, opened across from the Townes at Eager Park on McDonough Street.

INCLUSION CONTRACTING

A major community benefit as articulated by EBDI and its partners is the initiative’s focus on contracting from firms whose owners are nonwhite, female, or based in Baltimore. Indeed, EBDI’s inclusion contracting efforts have been lifted up as a national model (Herbert 2018; Rubin et al. 2015; Schachtel 2011). Contracting goals have been a part of the intervention since the beginning. In 2002, the partners signed a “minority inclusion agreement,” which formalized race and gender goals around real estate development, hiring, and contracting.

EBDI developed an inclusion policy based on the minority inclusion agreement, which sets forth the goals and requirements for each real estate project. EBDI has modified and strengthened the policy at several points, adding preferences for joint ventures with East Baltimore businesses in 2006, and later addressing hiring (Rubin et al. 2015; Schachtel 2011). EBDI defined “local” with three priority categories: (1) residents or businesses in the EBDI project area; (2) East Baltimore more broadly, as defined by 11 zip codes; and (3) Baltimore City residents or businesses. The local business target for all developments is that Baltimore firms receive 20 percent of the total contract value (EBDI 2017a, 2017b). The minority ownership target depends on the type of contract (table 4). EBDI has been reported as having the highest minority- and women-owned contracting goal in Baltimore.¹⁸

To help contractors identify potential partners to fulfill these goals, EBDI created a local vendor directory. EBDI also created a women’s contractor college with courses and networking opportunities.¹⁹ Contractors have to submit an economic inclusion plan to EBDI articulating how they will help meet the initiative’s goals with respect to inclusion contracting and hiring.²⁰

Developers (and their contractors) also have to undergo robust monitoring of inclusion contracting and hiring performance. EBDI initially contracted the Greater Baltimore Urban League to do the inclusion monitoring and technical assistance work, with support from the Greater Philadelphia Urban Affairs Coalition (Schachtel 2011). EBDI then engaged the Diversity Professionals Network, a local minority woman-owned firm, which partnered with Sage Policy Group.²¹ The current monitoring team comprises Sage and the Nelson Ideation Group. The monitor is charged with educating companies interested in participating in the development process about the goals and reporting requirements (Schachtel 2011). With other local and state partners, the monitor also works to build the capacity of minority- or women-owned enterprises. The monitor is part of the team that reviews bids with the developer and meets with the winning bidder to orient it to policies and procedures. The monitor reviews contracts, invoices, lien releases, and payroll and employment hours monthly, and submits quarterly reports to EBDI (Schachtel 2011). According to a recent monitoring report, EBDI has largely surpassed its inclusion contracting goals except for women-owned businesses, which is what prompted EBDI to hold the women’s contracting college (table 4).

TABLE 4

EBDI Economic Inclusion Goals and Performance, 2006–18 (as a Percentage of Total Contract Value)

Firm characteristic	Construction		Design, Architecture, and Engineering		Professional and General Services	
	Goal	Actual	Goal	Actual	Goal	Actual
Minority-owned	27	34	21	24	17	14
Woman-owned	8	7	13	17	9	22
Baltimore-based	20	35	20	32	20	53

Source: DPN Group and Sage Policy Group, “Economic Inclusion Third Party Monitoring and Compliance Verification Summary of Achievement—Reporting Period: 2006–September 30, 2018” (Baltimore: East Baltimore Development Inc., 2018).

EMPLOYMENT AND WORKFORCE TRAINING

A fourth component of the East Baltimore Development Initiative is employment and workforce training. In 2007, EBDI created a workforce development pipeline to connect participants to training and to help remove barriers related to literacy, transit, and child care (Rubin et al. 2015; Schachtel 2011). EBDI provided some direct assistance and helped connect residents to further education or industry-specific training, including by working with the Mayor’s Office of Employment Development (Rubin et al. 2015). But in 2014, EBDI transitioned its workforce development direct service efforts to the Mayor’s Office of Employment Development, which works in partnership with other community-based workforce partners—such as Humanim, Jumpstart construction preapprenticeship program, BioTechnical Institute of Maryland, and the Historic East Baltimore Community Action Coalition—to train local workers for jobs. EBDI continued to monitor economic inclusion and local hiring for all real estate projects (Rubin et al. 2015). (The Annie E. Casey Foundation has also made sustained investments in workforce development in East Baltimore that are accessible to, but not specific or limited to, residents of the EBDI project area.)

EBDI created employment goals for its contractors to translate workforce training into job opportunities. That was accomplished via revisions to the minority inclusion agreement in 2011 and 2013 (Rubin et al. 2015). The local and minority hiring goals include workers completing 23 percent of the work on commercial projects and 25 percent of the work on residential projects, specifically with 12 percent of the work being done by East Baltimore residents. All proposals must include workforce projection plans so that workforce trainers can know how many of which types of positions will be needed (Schachtel 2011).

As of 2018, EBDI had created 6,685 construction, security, and janitorial jobs, as measured by certified payroll (DPN Group & Sage Policy Group 2018). Of those, 18 percent went to East Baltimore residents and 33 percent to Baltimore City residents. It is unclear how many jobs went to

residents who were initially living in the EBDI project area. The average hourly wage for all the created construction, security, and janitorial jobs was \$23.85. The average hourly wage for East Baltimore residents in those jobs was \$20.49. EBDI had some hand in securing those positions. As of 2015, EBDI helped 270 residents get hired in the project area via the workforce pipeline. A majority of those individuals had criminal records (Rubin et al. 2015).

From the inception of the project through September 2018, the East Baltimore Development Initiative created 1,416 permanent jobs, as reported by tenants in the project area.²² Almost all of them are full-time positions.²³ As of 2009, many of the permanent jobs created were high skilled (Clinch 2009), though EBDI has generated several retail, cleaning, and security jobs since that point.

EDUCATION

A final component of the East Baltimore Development Initiative is a focus on education. That focus began with EBDI incubating and operating the area's public contract school, the East Baltimore Community School. As the initiative continued, community residents wanted a high-quality attractive school in their community. EBDI opened a K-8 school in 2014 in a newly developed building: Elmer A. Henderson: A Johns Hopkins Partnership School, or Henderson-Hopkins for short. It was the first new school in East Baltimore in more than 25 years. It enrolls roughly 550 students. In the same building is the Weinberg Early Childhood Center, which also opened in 2014. The center serves roughly 100 children, from infancy through age 5.²⁴

The operator of the Henderson-Hopkins School is the Johns Hopkins School of Education in partnership with Morgan State University's School of Education and Urban Studies, though it is not a charter school and teachers are still hired through the Baltimore City Public School District. In addition to an architecturally award-winning facility, the school has several elements designed to reach and bolster the community. They include a family resource center and accessible library (Eberhart and Barnes 2014). The school campus also houses the East Baltimore Historical Library located in historic rehabilitated rowhouses embedded in the school's design.

According to the National Center for Education Statistics, 96 percent of students in the school are Black. As reported to the state, math test scores for the elementary grades are modestly above the Baltimore City Public Schools' average, and for English, they are well above the Baltimore City Public Schools' average, though in both cases they are still below the statewide average in Maryland.

INITIATIVE FINANCING

Designed as a \$1.8 billion effort, the project area saw over half that invested by 2017: \$1.043 billion (in inflation-adjusted terms). Of the funds invested from 2004 through June 2017, the largest category of investment was in the development of health, health research, and academic facilities (\$385 million). That category is followed by acquisition, relocation, and demolition expenses (\$149 million). Table 5 shows the summary investment amounts by category, with detailed data in Theodos, Hangen, Meixell, and Foster (2020).

TABLE 5

Investments in the East Baltimore Development Initiative by Category, 2004 through June 2017

Investment category	Investment amount
Health, health research, and academic facilities	\$385,257,524
Acquisition, relocation, and demolition	\$148,511,103
Infrastructure, parks, and parking	\$120,858,406
Operating and programmatic costs and services	\$101,225,456
Hotel	\$85,619,533
Residential development	\$80,620,097
Student housing and Maryland Institute College of Art live-work space	\$64,047,248
School and child center	\$57,457,878
Total investment	\$1,043,597,245

Source: Brett Theodos, Eric Hangen, Brady Meixell, and Lionel Foster, *Neighborhood Investment Flows into Baltimore: With a Case Study on East Baltimore Development Inc* (Washington, DC: Urban Institute, 2020).

These figures represent a level of private- and public-sector investment well above what comparable neighborhoods in Baltimore (Theodos, Hangen, Meixell, and Foster 2020) or other cities received during this period (Theodos et al. 2017; Theodos et al. 2018; Theodos et al. 2019). They include major federal funding—three NMTC and three Low-Income Housing Tax Credit projects, in addition to financing from HUD’s Section 108 program. They also include meaningful state contributions, such as those from Maryland’s Program Open Space. The city has been a key contributor as well, including approval of \$85 million in tax increment financing bonds. Johns Hopkins University has made many direct and indirect financial contributions to the East Baltimore Development Initiative. Those include, for example, paying \$400,000 annually into a payment in lieu of taxes equivalent, or PILOT, for the graduate student tower.²⁵

Philanthropy has been a key donor and investor. The Harry and Jeanette Weinberg Foundation contributed \$15 million for the early childhood center, \$3 million for Henderson-Hopkins School capital funds, and funding for operating expenses. By 2014, the Annie E. Casey Foundation had invested more than \$100 million in EBDI’s work, including grants and debt and equity financing. That includes steps like guaranteeing NMTC loans so they could be sold to investors. The Annie E. Casey Foundation also purchased the first \$20 million in tax increment financing bonds, and later, when a

buyer could not be identified, an additional \$24 million. The foundation also provided a \$21 million bridge loan to build the Henderson-Hopkins School (Brophy and Waldron 2014). For additional detail on funding partners, see Bonds, Burnett, and Sissman (2018).

Response and Adaptation

As described, the East Baltimore Development Initiative is a work in progress. The initiative still envisions spending hundreds of million dollars over several years. The physical footprint where the initiative is working is visibly incomplete, with several grassy parcels awaiting infill development. Over the next three to five years, EBDI anticipates building nearly 500 housing units and the next lab/commercial building, and attracting a grocery store. Development may be aided by the area's census tracts' selection as Opportunity Zones, the latest federal economic development tax incentive (Theodos, Hangen, González, and Meixell 2020).

The East Baltimore Development Initiative effort is spurring attention and action in areas immediately adjacent to it. Impressionistically, these redevelopment efforts have not progressed far enough to have notably affected the EBDI project area, but if successful, they will. One adjacent project is the A. Hoen & Co. Lithograph Building, diagonally across the street to the northeast of the EBDI project area. The building, which dates back to 1900, was home to the firm's lithograph printing business until the building became vacant in 1981 when the firm went bankrupt. The space will be leased to nonprofits providing job training and adult literacy classes; it will also have event and office space. (The redevelopment is being funded by NMTCs, the US Economic Development Administration, and state and local funding.)

Another notable development is the Baltimore Pumphouse, which is just north of the EBDI project area in the former Eastern Avenue Pumping Station, that made use of NMTCs and other subsidy sources. The Pumphouse has space for City Seeds, a catering social venture of Humanim, a large human service and social enterprise nonprofit. Phase 2 will include a food hall and market.²⁶ In addition, Humanim's NMTC-supported large rehabilitation of the American Brewery is a short distance up N. Gay Street from the EBDI project area. The American Brewery facility has offices for Humanim as well as workforce training facilities.

Another effort to note is that BUILD (Baltimoreans United in Leadership Development) has been working in Oliver, just to the north and west of the East Baltimore Development Initiative. BUILD is constructing affordable homes that directly link to the market activity generated by the East Baltimore Development Initiative.²⁷ ReBuild Metro is leading that work and has been invited by EBDI to redevelop a few blocks in the northern EBDI project area where rowhouses cannot be torn down per state historic preservation standards.

The nearby project that will be perhaps the most impactful is the redevelopment of the 629-unit Perkins Homes public housing development. Perkins Homes and some surrounding properties are being redeveloped in part thanks to a \$30 million Choice Neighborhoods grant from HUD. That grant is one piece of a \$540 million effort that will create 1,345 mixed-use units.²⁸ The area sits directly between Fells Point and the increasingly affluent waterfront area to the south and the Johns Hopkins medical campus to the north.

What then do we make of the East Baltimore Development Initiative and all those surrounding efforts? It is clear that East Baltimore is changing, thanks to the incredible—and in many ways unprecedented—marshaling of federal, state, city, university, and philanthropic support deployed via the East Baltimore Development Initiative. It is also clear that to proceed, development in the area still requires concessionary or free (i.e., grant) capital: demand for residential or commercial space is not strong enough to support market-rate development at these levels.

Methodological Approach

Methodology

To investigate causal effects of the East Baltimore Development Initiative, I use the “synthetic control” method (Abadie, Diamond, and Hainmueller 2010), a new approach that has yet to be used to assess comprehensive community initiatives. Under a synthetic control approach, evaluators assess the project community not against a singular observed comparison area but an artificial comparison created by combining and appropriately weighting the most representative nontreated areas.

The approach works by comparing a treated area with comparison communities. It treats the project area as one treated unit and creates a weighted composite of “pooled” comparison communities to become a “synthetic control” against which differences in outcomes can be assessed. Put differently, the analysis weights comparison communities to create a single control that best resembles the project area’s community in the preintervention period; it then measures the difference in the differences of outcomes before and after the intervention between the treatment community and the composite of comparison communities. The approach generates weights to minimize the difference between the project area’s pretreatment measures and that of a synthetic control. Weights are time invariant; there is one set of pre- and posttreatment weights. The synthetic control is the counterfactual for what would have been observed in the project area but for the intervention.

There is a sample of $J + 1$ units, and the treated unit is the first one, with its outcome being y_1 and the outcomes for the other units being y_j . To assess impacts, I define the pretreatment period as $t = 1, \dots, T_1$ and after treatment as $t = T_1 + 1, \dots, T_2$; y_{jt}^1 indicates units that may or may not be treated in a world where treatment does not exist, and y_{jt}^2 indicates treated and untreated units in a world where treatment does exist. I seek to estimate $a_{1t} = (y_{1t}^2 - y_{1t}^1)$ for $t = T_1 + 1, \dots, T_2$. (Before $t = T_1 + 1$, they are the same.) We observe y_{1t}^2 ; we do not observe y_{1t}^1 .

The synthetic control is created from the J pool of control tracts based on weights that are defined such that $w_j \geq 0$ and $\sum w_j = 1$. Let $W = (w_2, \dots, w_{j+1})'$, with each value of W representing a potential synthetic control. The treatment effect is estimated by taking the difference between the actual outcome and the synthetic control in the posttreatment period:

$$\hat{\alpha}_{1t} = y_{1t}^2 - \sum_{j=2}^{J+1} w_j^* y_{jt}^1.$$

Following Abadie, Diamond, and Hainmueller (2010), I select w^* as the value of W that minimizes the expression $\|X_1 - X_0 W\|_v = \sqrt{(X_1 - X_0 W)' V (X_1 - X_0 W)}$, where $X_1 = (y_{1,1}, \dots, y_{1,t})'$ is a $(T_1 \times 1)$ vector of the pretreatment outcome, and X_0 is a $(T_1 \times J)$ matrix containing the pretreatment outcome for untreated communities. I select v so that the synthetic control minimizes pretreatment, the root mean square prediction error (the gap in the variables of interest between the project community and its synthetic control).

In implementing a synthetic control approach, it is necessary to select pretreatment measures that can be used to create a control that minimizes preintervention discrepancies in levels and trends. The approach is almost always used when data are available for multiple pretreatment periods for both the project area and the donor pool communities—that is, communities that are eligible to be included in the synthetic control.

The most important covariate is the pretreatment dependent variable (McClelland and Gault 2017). The advantage of incorporating this measure is that it will likely include the effects of other important factors that predict it for the period in question—and thereby overcome the problem of omitting important predictive measures. But Kaul and coauthors (2018) demonstrate that including previous lags (i.e., pretreatment observations) for the outcome variable removes the predictive power of all other covariates, given how the method works. Yet, McClelland and Gault (2017) do not find that the alternative that Kaul and coauthors (2018) propose results in a better pretreatment fit.

The synthetic control method relies on several assumptions, most in common with those required for other difference-in-differences techniques. First, the synthetic control approach assumes that donor areas are not directly treated. Second, the approach assumes that there is no

interference across areas—that is, an intervention does not affect the communities outside the project area. Third, the initiative has no effect before it is created. Fourth, there are consistent pre- and posttreatment observations for treated and untreated communities. Fifth, the treated community can be approximated by a combination of donor communities. This approximation requires that the treated area not be an outlier in the pretreatment periods. The approach must closely match the project area and donor community’s characteristics before treatment.

The synthetic control method does not generate measures of statistical significance as is standard in the difference-in-differences models. Standard methods of inference are not appropriate, given that each intervention has only a single project area. Standard methods of inference do not make probabilistic assumptions but instead rely on the law of large numbers to create confidence that the characteristics of a sample resemble that of the larger population. This approach examines just one treated area, however.

It is possible, though, to conduct an inferential exercise by testing placebo scenarios or falsification tests. As developed by Abadie, Diamond, and Hainmueller (2010), it is possible to conduct “in place” falsification tests. The logic is intuitive. Suppose that under the method, the project area appeared to diverge moderately from its synthetic control posttreatment. Is such a result meaningful? One way to know would be to understand how exceptional this divergence is. Suppose 99 communities were in a donor pool for the project area; the synthetic control method could be replicated for each of them, pretending that each was in fact the treated community and estimating the effect for each one—that is, generating 99 new synthetic controls. The results for the truly treated East Baltimore Development Initiative project area could then be compared with results of the placebo communities (as though they were presumed to have been treated). If the effect estimated for the treated community is 50th in magnitude relative to all 100 communities, the intervention’s effects are unlikely to have exceeded random noise. If, however, the project area is ranked in the top 5 or 10 of all 100 communities, the intervention likely had an effect.

To determine whether the estimate for the treated community is large or small, one can calculate the share of placebos that have a posttreatment root mean square prediction error at least as large as the average for the treated unit.²⁹ If the estimate for the East Baltimore Development Initiative project area falls outside most of the comparison estimates in its posttreatment root mean square prediction error (e.g., if it is within the 10th percentile), the evidence base is strengthened because the intervention had an effect on the outcome of interest, rather than any difference occurring simply by chance.

Implementation

An important step with the synthetic control method is selecting the best unit of analysis. Given the intervention's size, census tracts allow the closest approximation of the treated area. The initiative's physical redevelopment and education supports have focused on two tracts. The two East Baltimore Development Initiative tracts are also similar pretreatment. For analysis, I simply average all pre- and posttreatment values for the two tracts, treating them as one treated area, and then conduct the analysis. As a robustness check, I investigate other specifications of the treated area.

It is necessary in the synthetic control approach to define an appropriate donor pool of comparison units eligible to be included in the synthetic control. As there are many tracts in the US, for analytic ease, I limit the potential donor pool to tracts that closely resemble the project community. (Beyond a certain point, additional tracts add little or nothing to the estimate.)

My preferred donor pool is a national donor pool. The national donor pool for the East Baltimore Development Initiative project area has 386 donor tracts. To create the national donor pool, I first exclude all tracts that are not in a metropolitan statistical area (MSA). I then keep only MSAs with levels and trends similar to those of each project area's MSA (separately for each project area). I keep MSAs that are within three standard deviations of the project area's MSA for population, white population share, share of residents with a bachelor's degree, average household income, poverty rate, owner occupancy share, and average owner-occupant home value for all the periods in the study (1970 to 2015–19). I apply this selection requirement both before and after treatment to ensure that MSAs are on the same trajectory, with the logic that MSA-wide averages were not affected by the interventions.

After limiting the sample to MSAs with similar levels and trends as the project area's MSA, I then keep only tracts in those MSAs that are one standard deviation from the project area for all pretreatment periods (using the same variables I used to select MSAs).

I add additional constraints. To address the synthetic control method's assumption that comparison areas are untreated, I remove all tracts in all the donor pools that had an active revitalization initiative during the pre- and posttreatment observation periods. I use a list of community revitalization initiatives as defined in the literature. I also exclude tracts undergoing major public housing demolition and rehabilitation, as defined by receiving these funds via HUD's HOPE VI Program. Given that spatial interference is mostly plausible with tracts surrounding a project area, I also exclude from the donor pools tracts adjacent to the East Baltimore Development Initiative.

As a robustness check, I replicate the analysis with two other donor pools. The first pool is similar to the national model; but rather than tracts that are one standard deviation from the project area, it uses tracts that are three-quarters of a standard deviation. The second pool is defined from all tracts within Baltimore (except for neighboring tracts and those with similar interventions). The results (not shown, for brevity) are highly consistent across the donor pools.

The synthetic control approach generates weights to minimize the difference between the project area's pretreatment measures (preintervention outcome indicators together with any other covariates if included) and that of a synthetic control. The most important covariate is the pretreatment dependent variable. I include it here, separately, for all pretreatment years. Synthetic control analyses sometimes average or omit some pretreatment years of the pretreatment variable to avoid overfitting. But this study has only four pretreatment observations (1970, 1980, 1990, and 2000).

The synthetic control method maximizes pretreatment fit for the pretreatment outcome variable. When I include the pretreatment outcome variable for all pretreatment periods, the analysis, in maximizing fit, will rely only on that outcome variable to do so. As such, I do not include pretreatment covariates other than the pretreatment variable.

Data and Outcome Measures

Like with other revitalization evaluations, indicators for this study should be measured over a long period, with as many observation points as possible, and at a small unit of geography (Galster, Tatian, and Accordino 2006). I use data from the decennial censuses in 1970, 1980, 1990, and 2000 and data from the American Community Survey from 2006 through 2019. Relying on multiple preintervention data points from the decennial census allows the observation of both the level and trajectory of change in the project and comparison areas before the initiative began. Further, observing change through 2019 allows enough time for impacts to develop, based on when the interventions began.

Data from both the decennial census and the American Community Survey allow for investigation of small geographic areas. I rely on tract-level data in evaluating the East Baltimore Development Initiative. Tracts are Census Bureau-defined geographies of 4,000 to 8,000 people. Because the Census Bureau has shifted the boundaries of some tracts, I use the Neighborhood Change Database, a set of historical tract-level census data from 1970 through 2010 converted into 2010 census tract boundary definitions developed by the Urban Institute and GeoLytics. I therefore have a balanced panel of census tracts, with all tracts present in all years.

An important question at this juncture is why these are the logical outcomes for the comprehensive community initiative. The East Baltimore Development Initiative attempted to achieve several benefits for residents in its project area. Several are reflected as intermediate or long-term processes that can be captured in the data points described above. For example, the initiative relocated residents and then built new housing, meaning that population changes are clearly related to programmatic activity. Improvements in educational attainment, poverty status, and income are all outcomes directly anticipated from the youth, education, and workforce supports and services the programming introduced. The outcomes may also change because of the in-migration of residents with characteristics that are different from incumbent residents. Similarly, homeownership rates, property values, and rents can be directly and indirectly affected by the East Baltimore Development Initiative as it developed and rented housing, some of it market-rate housing. Race and ethnicity are logical to check to understand how the surrounding neighborhood is changing and to provide insight into the processes of change—that is, changes for incumbent residents versus changes caused by differences in which households reside in a neighborhood.

Several relevant outcomes emerge beyond the ones mentioned above, including outcomes related to academic advancement and socioemotional well-being for children and youth, college matriculation, public safety, access to fresh foods and other retail stores, physical and mental health for adults, and access to recreational facilities and parks. I affirm the value of these outcomes as they reflect key elements of the initiative's purpose and approach. I do not, however, include them in this study, as it is difficult to collect or access data for project area and comparison communities, and some data are unavailable. That said, future work could explore some of these outcomes, especially for initiatives that have begun more recently and for which pretreatment data are available.

Results

EBDI invested or facilitated the provision of hundreds of millions of dollars into a narrowly targeted community. Although this sum may seem large, the investment took place over more than 25 years. Further, even with the intervention-backed financing, communities undergoing comprehensive revitalization still often access smaller per capita levels of private market capital than many middle- and upper-income neighborhoods as a matter of course (Theodos, Hangen, Meixell, and Foster 2020). But compared with other undercapitalized neighborhoods, investments from comprehensive community initiatives can be outsized.

Pretreatment Fit

Impact assessment is only as good as the comparisons it draws, and those are best understood by examining how comparable treated and comparison units are in the pretreatment period. The validity of the synthetic control approach, along with difference-in-differences models in general, hinges on the quality of pretreatment fit. The objective is to identify (or in this case create via amalgamation) a comparison unit where pretreatment trends are aligned with the project area in key outcome variables and other contextual indicators.

In this study, the pretreatment goodness of fit is strong. One way to understand goodness of fit is to observe how comparable the treated and comparison areas are in pretreatment measures other than the dependent variables. Each estimation of the synthetic control procedure defines a separate synthetic control. The synthetic control is defined separately for each dependent variable and therefore includes somewhat different tracts from the donor pool or some of the same tracts but in different proportions. It is possible to investigate how pretreatment measures other than the dependent variable (i.e., those that were not used to define the synthetic control for that dependent variable) compare for the project area and the synthetic control to understand goodness of fit.

Table 6 shows pretreatment characteristics for the Baltimore site. The results demonstrate that, with some exceptions, the project area and its synthetic controls are similar, not only for the dependent variable but for the nondependent variables as well. Of course, these pretreatment fit analyses compare only observable metrics, and it is possible there are unobserved factors that compromise the validity of the comparisons advanced here. I also include pretreatment averages for the entire donor pool for comparison.

TABLE 6

East Baltimore Development Initiative Project Area Pretreatment Characteristics

Pretreatment characteristic	Project area	Synthetic Control (Average 1970–2000)									
		Population density	Black share	White share	BA	Income	Poverty	Homeownership	Home value	Gross rent	Donor pool
Population density	27,410	27,093	10,752	6,876	9,198	17,985	14,667	12,495	15,694	15,376	9,664
Black share (%)	0.96	0.90	0.95	0.92	0.82	0.70	0.85	0.85	0.89	0.88	0.83
White share (%)	0.02	0.02	0.01	0.02	0.11	0.12	0.08	0.07	0.08	0.05	0.08
BA (%)	0.04	0.05	0.05	0.08	0.04	0.07	0.06	0.05	0.05	0.04	0.06
Income (\$)	37,217	34,335	32,494	33,369	33,449	37,295	34,103	33,026	38,089	34,721	34,121
Poverty (%)	0.43	0.38	0.38	0.36	0.43	0.39	0.44	0.44	0.40	0.39	0.41
Homeownership (%)	0.14	0.12	0.21	0.18	0.18	0.17	0.17	0.15	0.25	0.19	0.21
Home value (\$)	41,360	39,951	45,504	73,074	61,893	78,178	68,621	64,956	42,902	55,463	61,038
Gross rent (\$)	559	542	512	511	454	536	494	481	576	546	491

Sources: 1970, 1980, 1990, and 2000 Decennial Censuses.

Notes: BA = share with a bachelor's degree. This donor pool has 386 placebos. Dollar values are adjusted for inflation and are reported as 2017 values.

Interim Outcomes

EBDI's approach—of relocation, demolition, and new construction of affordable housing, market-rate housing, a park, office and lab space, retail, a local school, contracting requirements, and employment and relocation services—signifies a large and sustained investment in a small geography. This research tests the hypothesis that these investments caused observable changes to the neighborhood, specifically whether the intervention led to a smaller population because of displacement, changes in racial and ethnic composition, lower poverty rates and higher incomes, higher educational attainment, higher homeownership rates, and higher property values. The initiative could well have had effects for youth and families who subsequently left the neighborhood.

Starting with population trends, the project area's population density was declining markedly *before* the intervention; from 1970 to 2000, its population density dropped by half. Dramatic population decline continued after relocation began, nearly dropping by half again from 2000 to 2006–10. The estimated population density of the synthetic control, however, did not decrease from 2000 to 2006–10. Synthetic control estimates for only 1 percent of tracts in the donor pool had a posttreatment root mean square prediction error as large as the project area's (table 7). Since 2006–10, however, the population in the project area has steadily grown, whereas the estimated population of the synthetic control has continued to decline. For EBDI, relocation was the first phase of redevelopment. Reconstruction of housing was slow. But as evidenced by population gains in recent years, the East Baltimore Development Initiative is bringing more units online. Population levels for the project area have now reached parity with the synthetic control and have even begun to surpass it. (And, as mentioned, close to 500 new housing units are in predevelopment, so population levels are expected to continue to increase.)

In addition to the root mean square prediction error calculation, a helpful way to understand whether the intervention had an impact on a given outcome is to visualize the difference between the project area and its synthetic control and to do the same for each placebo, again pretending that it was the treated unit. These differences are shown in figure 1. The vertical dark gray line signifies the last pretreatment observation, in 2000. The blue line is the difference between the EBDI project area and its synthetic control. A difference close to zero *before* the treatment indicates good pretreatment fit. As the figure shows, in the postintervention period, the EBDI project area (the blue line) is among the communities with the highest population losses by 2006–10 relative to its synthetic control estimate but then regains population steadily after that point.

Did those population trends differ by race or ethnicity? Through 2015–19, the EBDI project area has not experienced changes in racial composition relative to the counterfactual. Although the share of EBDI project area residents who are Black has declined modestly (96 percent to 88 percent), this change was comparable with the change for the synthetic control (94 percent to 85 percent). Very few EBDI residents were white in 2000 (2 percent). That factor was little unchanged by 2015–19 and was not significantly different from the synthetic control estimate.

Looking next at trends in formal education, 5 percent of residents of both the project area and the estimated synthetic control had bachelor’s degrees in 2000. The project area has increased considerably in just the past few years, from 7 percent in 2009–13 to 25 percent in 2015–19, and is 11 percentage points above the synthetic control by the most recent data period. The inference tests indicate that this change is not yet statistically significant. But a treatment effect may become evident in subsequent years with continued market-rate ownership and Johns Hopkins–related development.

Income has increased modestly in inflation-adjusted terms since the intervention began (from \$40,000 at the beginning to \$45,000 in 2015–19) and no statistical change has occurred relative to the synthetic control. Many factors explain why. The intervention has opened multiple affordable housing developments. The initiative welcomed back residents who previously lived in the neighborhood, some of whom had low or moderate incomes. Finally, EBDI built a large apartment building for graduate students, many of whom have low earnings while in school—so the student housing did not raise average incomes as much as might be expected with the increasing college education rate. The trends in poverty rates are analogous to those of incomes—that is, no statistically significant difference.

The East Baltimore Development Initiative may have resulted in a declining homeownership rate. Eighteen percent of households in both the project area and the estimated synthetic control were homeowners in 2000. That fell to 7 percent for the project area by 2015–19; the synthetic control estimate was 20 percent. (The share of synthetic control estimates from tracts in the donor pool with a root mean square prediction error calculation higher than that of the project area is as low as 5 or 6 percent in some posttreatment years.) These trends also confirm what is known about EBDI’s activities. The housing stock EBDI demolished was largely single-family rowhouses, some of which were owner occupied. Also, the first units that EBDI built back were rental units. Since 2018, EBDI has built back some owner-occupied housing, so this impact may dissipate in the future.

Home values in the EBDI project area grew from \$40,000 in 2000 (in current dollars) to \$130,000 by 2015–19. That increase places the project area \$26,000 above the synthetic control

estimate. But we cannot distinguish these changes from the average change. Again, this finding may emerge as more market-rate homes are developed and sold by EBDI.

We do see the East Baltimore Development Initiative's impact on average rents. Rents have risen in real terms from \$576 to \$1,051 per month for the project area versus \$556 to \$729 for the synthetic control estimate. Only 9 percent of tracts in the donor pool experienced changes to this degree.

TABLE 7

East Baltimore Development Initiative Outcomes

Panel A

Year	Population Density				Black Population Share				White Population Share			
	Project area	Synthetic control	Diff.	RMSPE	Project area	Synthetic control	Diff.	RMSPE	Project area	Synthetic control	Diff.	RMSPE
1970	37,439	36,993			0.95	0.93			0.04	0.04		
1980	29,733	29,419			0.97	0.95			0.01	0.00		
1990	25,819	25,544			0.98	0.96			0.02	0.01		
2000	16,650	16,414			0.96	0.94			0.02	0.02		
2010	8,414	17,123	-8,709	0.01	0.86	0.93	-0.06	0.48	0.05	0.04	0.01	0.74
2011	8,980	17,270	-8,290	0.01	0.85	0.91	-0.06	0.56	0.02	0.05	-0.03	0.52
2012	8,758	15,456	-6,697	0.03	0.88	0.91	-0.03	0.77	0.02	0.05	-0.03	0.49
2013	7,753	15,459	-7,706	0.01	0.96	0.89	0.06	0.50	0.00	0.05	-0.04	0.37
2014	9,763	16,390	-6,627	0.03	0.88	0.88	0.00	0.98	0.03	0.07	-0.04	0.41
2015	9,585	14,859	-5,274	0.06	0.87	0.87	0.00	1.00	0.05	0.08	-0.02	0.70
2016	10,543	14,694	-4,151	0.12	0.87	0.86	0.01	0.92	0.05	0.08	-0.02	0.65
2017	11,663	13,564	-1,901	0.32	0.88	0.84	0.04	0.71	0.05	0.09	-0.05	0.46
2018	12,237	12,977	-741	0.61	0.87	0.85	0.02	0.85	0.05	0.11	-0.06	0.37
2019	12,601	12,136	465	0.77	0.88	0.85	0.03	0.77	0.05	0.12	-0.07	0.33

Panel B

Year	BA				Income				Poverty Status			
	Project area	Synthetic control	Diff.	RMSPE	Project area	Synthetic control	Diff.	RMSPE	Project area	Synthetic control	Diff.	RMSPE
1970	0.02	0.02			35,931	35,976			0.40	0.41		
1980	0.03	0.03			30,707	30,736			0.44	0.46		
1990	0.04	0.04			42,244	42,292			0.40	0.41		
2000	0.05	0.05			39,987	40,174			0.48	0.50		
2010	0.06	0.09	-0.04	0.55	35,426	40,336	-4,911	0.65	0.48	0.46	0.02	0.90
2011	0.06	0.10	-0.03	0.64	36,543	40,559	-4,016	0.69	0.32	0.46	-0.14	0.26
2012	0.08	0.10	-0.02	0.75	34,559	43,104	-8,545	0.41	0.40	0.46	-0.06	0.65
2013	0.07	0.10	-0.04	0.57	28,919	41,004	-12,086	0.23	0.44	0.48	-0.03	0.77
2014	0.11	0.10	0.01	0.85	28,688	40,089	-11,401	0.29	0.49	0.46	0.03	0.77
2015	0.16	0.10	0.06	0.41	30,232	39,916	-9,684	0.32	0.47	0.45	0.03	0.82
2016	0.19	0.10	0.09	0.25	31,721	41,767	-10,046	0.34	0.48	0.42	0.06	0.60

Year	BA				Income				Poverty Status			
	Project area	Synthetic control	Diff.	RMSPE	Project area	Synthetic control	Diff.	RMSPE	Project area	Synthetic control	Diff.	RMSPE
2017	0.22	0.12	0.10	0.24	36,218	42,244	-6,026	0.56	0.40	0.42	-0.02	0.89
2018	0.26	0.13	0.13	0.15	38,175	46,244	-8,069	0.51	0.41	0.39	0.02	0.90
2019	0.25	0.14	0.11	0.24	44,849	49,152	-4,303	0.71	0.33	0.37	-0.04	0.79

Panel C

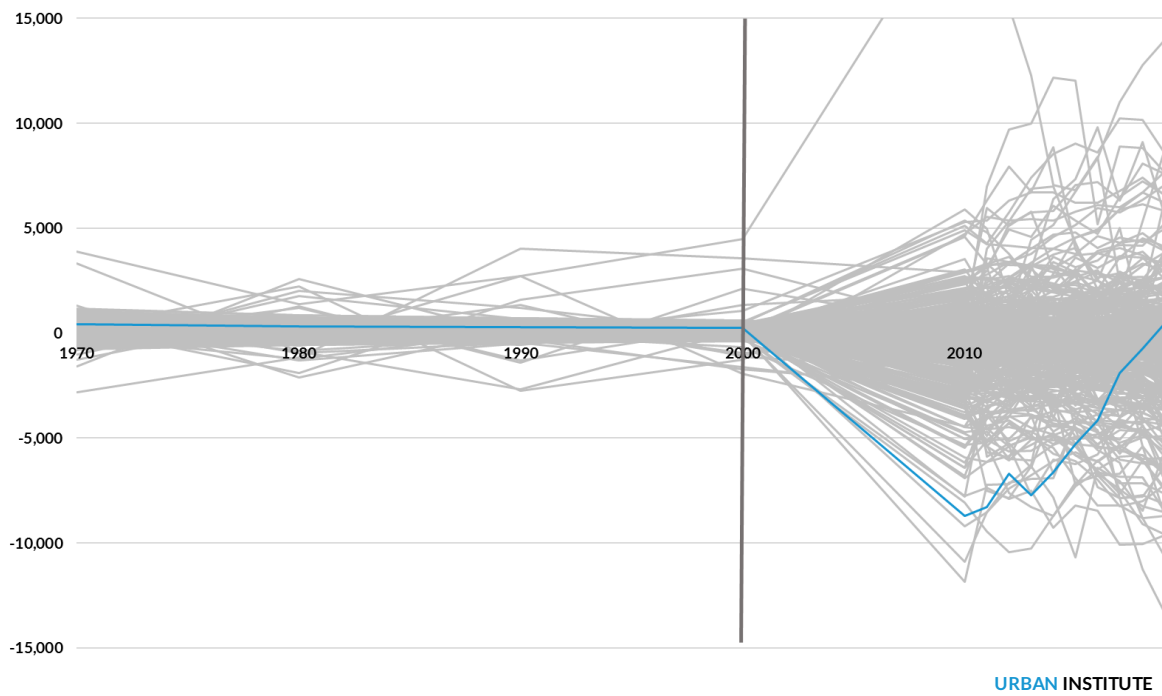
Year	Homeownership				Home Value				Gross Rent			
	Project area	Synthetic control	Diff.	RMSPE	Project area	Synthetic control	Diff.	RMSPE	Project area	Synthetic control	Diff.	RMSPE
1970	0.13	0.13			34,572	36,146			389	387		
1980	0.13	0.13			43,435	44,971			589	575		
1990	0.14	0.14			47,110	48,704			681	665		
2000	0.18	0.18			40,323	41,787			576	556		
2010	0.13	0.22	-0.09	0.22	144,776	112,505	32,271	0.59	762	811	-49	0.73
2011	0.10	0.21	-0.11	0.15	96,560	114,079	-17,519	0.79	759	797	-38	0.78
2012	0.11	0.20	-0.10	0.19	126,589	111,612	14,977	0.81	780	781	-2	0.99
2013	0.07	0.20	-0.13	0.08	146,964	100,611	46,352	0.37	772	753	19	0.89
2014	0.07	0.20	-0.13	0.06	167,339	96,069	71,270	0.25	786	726	60	0.67
2015	0.06	0.19	-0.13	0.05	158,181	96,155	62,026	0.33	836	709	127	0.35
2016	0.07	0.19	-0.12	0.09	162,560	90,436	72,124	0.29	952	714	239	0.13
2017	0.07	0.20	-0.13	0.11	120,229	93,157	27,072	0.69	1,040	728	312	0.09
2018	0.07	0.19	-0.12	0.11	126,250	99,395	26,855	0.75	1,060	732	328	0.08
2019	0.07	0.20	-0.13	0.12	130,300	104,677	25,623	0.77	1,051	729	322	0.09

Sources: 1970, 1980, 1990, and 2000 Decennial Censuses and 2006–10 through 2015–19 American Community Surveys.

Notes: BA = share with a bachelor's degree; RMSPE = root mean square prediction error. This donor pool has 368 placebos. The American Community Survey five-year estimates are labeled according to the last year in the series. RMSPE is the share of placebo synthetic control estimates with a root mean square prediction error greater than the project area in that year. Dollar values are adjusted for inflation and are reported as 2017 values.

FIGURE 1A

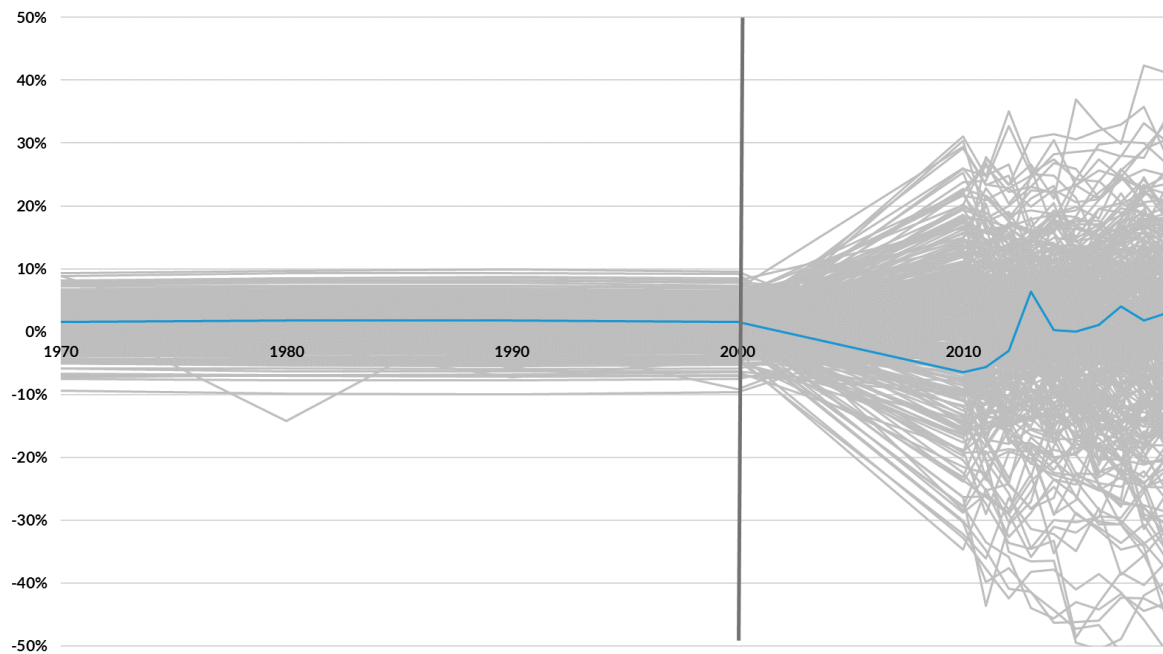
East Baltimore Development Initiative Outcomes for Population Density



Sources: 1970, 1980, 1990, and 2000 Decennial Censuses and 2006–10 through 2015–19 American Community Surveys.
Note: Figure indicates differences between the project area and its synthetic control (blue line) and each placebo and their synthetic controls (gray lines).

FIGURE 1B

East Baltimore Development Initiative Outcomes for the Black Population Share



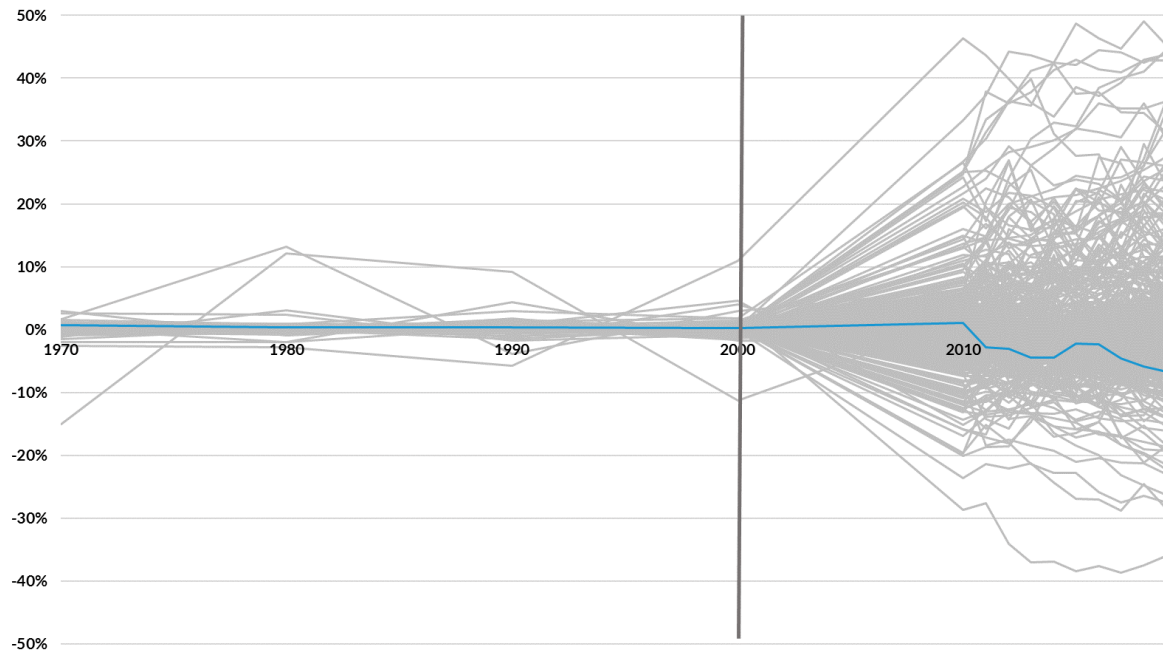
URBAN INSTITUTE

Sources: 1970, 1980, 1990, and 2000 Decennial Censuses and 2006–10 through 2015–19 American Community Surveys.

Note: Figure indicates differences between the project area and its synthetic control (blue line) and each placebo and their synthetic controls (gray lines).

FIGURE 1C

East Baltimore Development Initiative Outcomes for the White Population Share



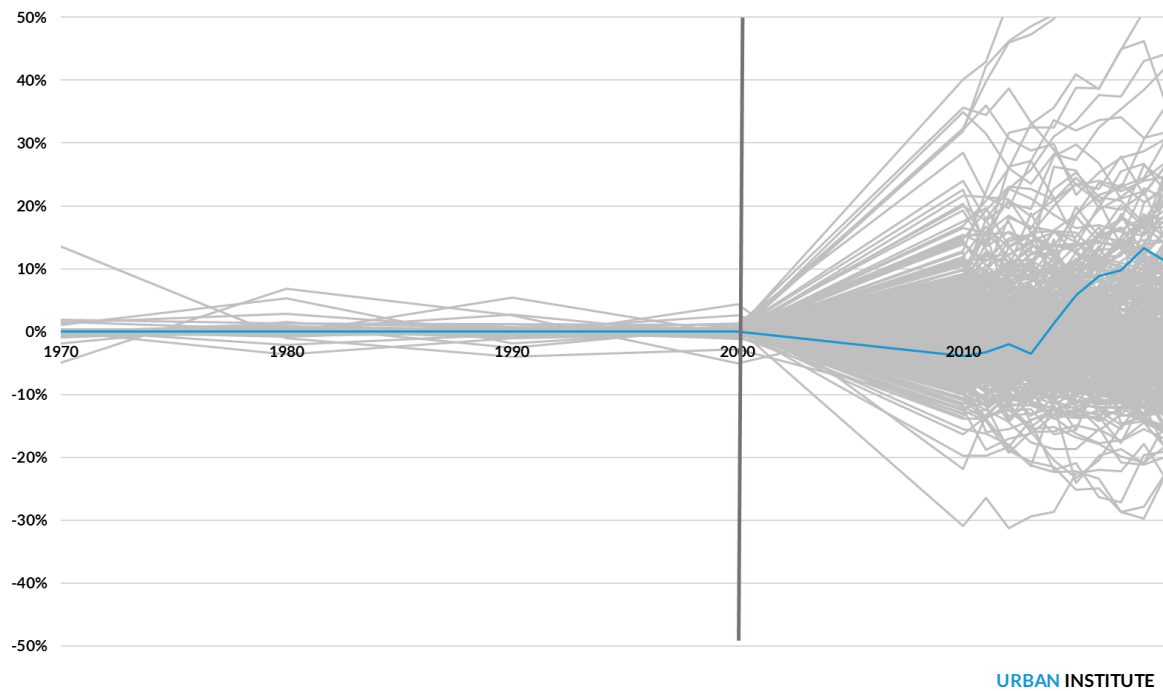
URBAN INSTITUTE

Sources: 1970, 1980, 1990, and 2000 Decennial Censuses and 2006–10 through 2015–19 American Community Surveys.

Note: Figure indicates differences between the project area and its synthetic control (blue line) and each placebo and their synthetic controls (gray lines).

FIGURE 1D

East Baltimore Development Initiative Outcomes for the Share of Residents with a Bachelor's Degree

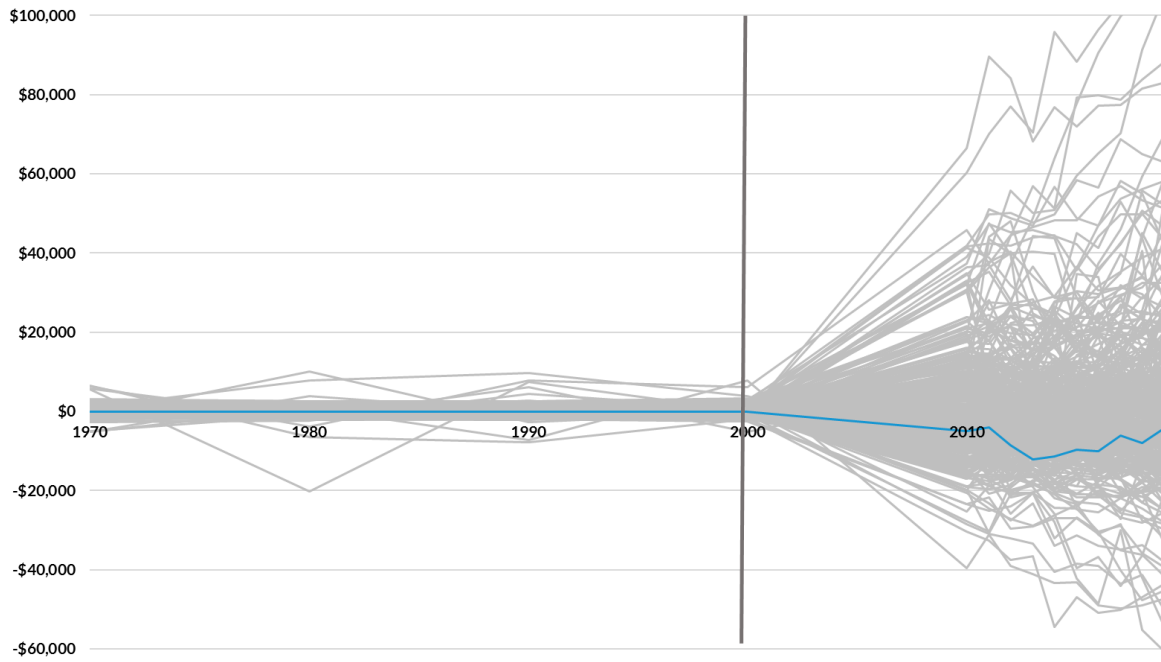


Sources: 1970, 1980, 1990, and 2000 Decennial Censuses and 2006–10 through 2015–19 American Community Surveys.

Note: Figure indicates differences between the project area and its synthetic control (blue line) and each placebo and their synthetic controls (gray lines).

FIGURE 1E

East Baltimore Development Initiative Outcomes for Income



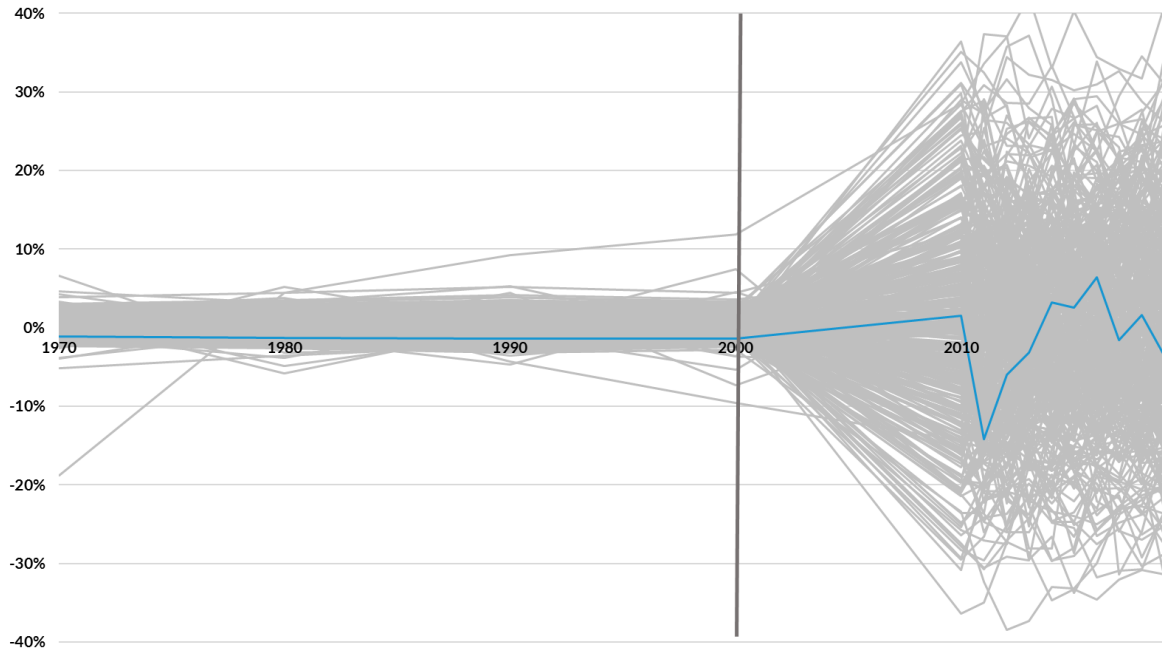
URBAN INSTITUTE

Sources: 1970, 1980, 1990, and 2000 Decennial Censuses and 2006–10 through 2015–19 American Community Surveys.

Note: Figure indicates differences between the project area and its synthetic control (blue line) and each placebo and their synthetic controls (gray lines).

FIGURE 1F

East Baltimore Development Initiative Outcomes for the Share of Residents Living in Poverty



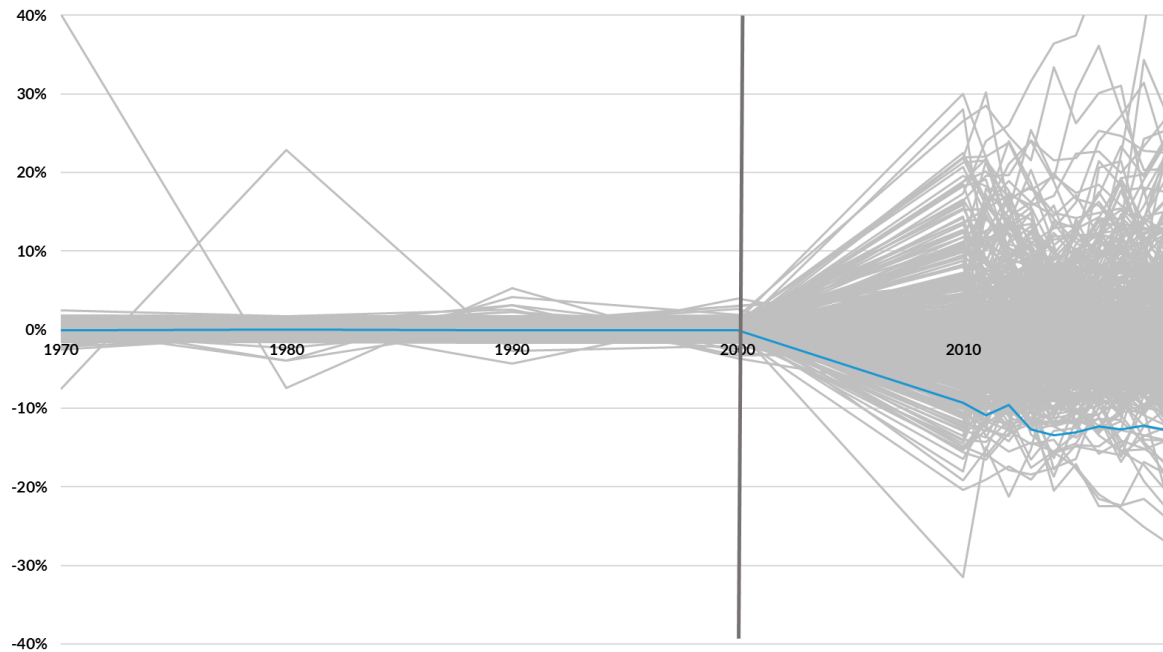
URBAN INSTITUTE

Sources: 1970, 1980, 1990, and 2000 Decennial Censuses and 2006–10 through 2015–19 American Community Surveys.

Note: Figure indicates differences between the project area and its synthetic control (blue line) and each placebo and their synthetic controls (gray lines).

FIGURE 1G

East Baltimore Development Initiative Outcomes for the Homeownership Rate



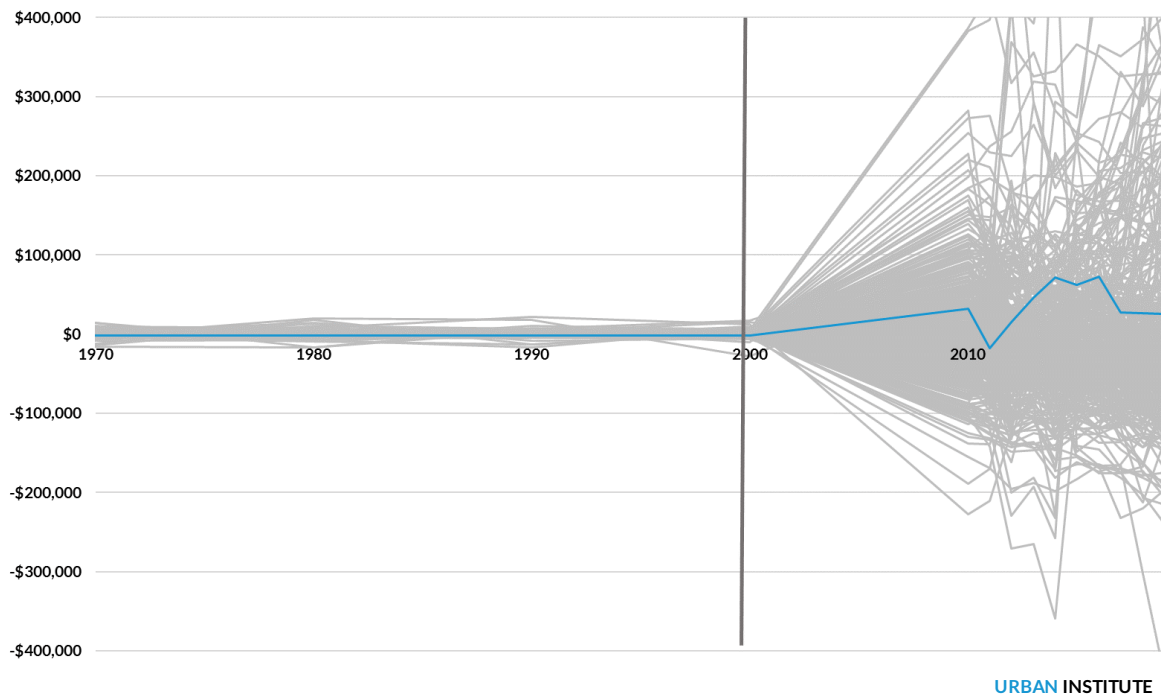
URBAN INSTITUTE

Sources: 1970, 1980, 1990, and 2000 Decennial Censuses and 2006–10 through 2015–19 American Community Surveys.

Note: Figure indicates differences between the project area and its synthetic control (blue line) and each placebo and their synthetic controls (gray lines).

FIGURE 1H

East Baltimore Development Initiative Outcomes for Home Values

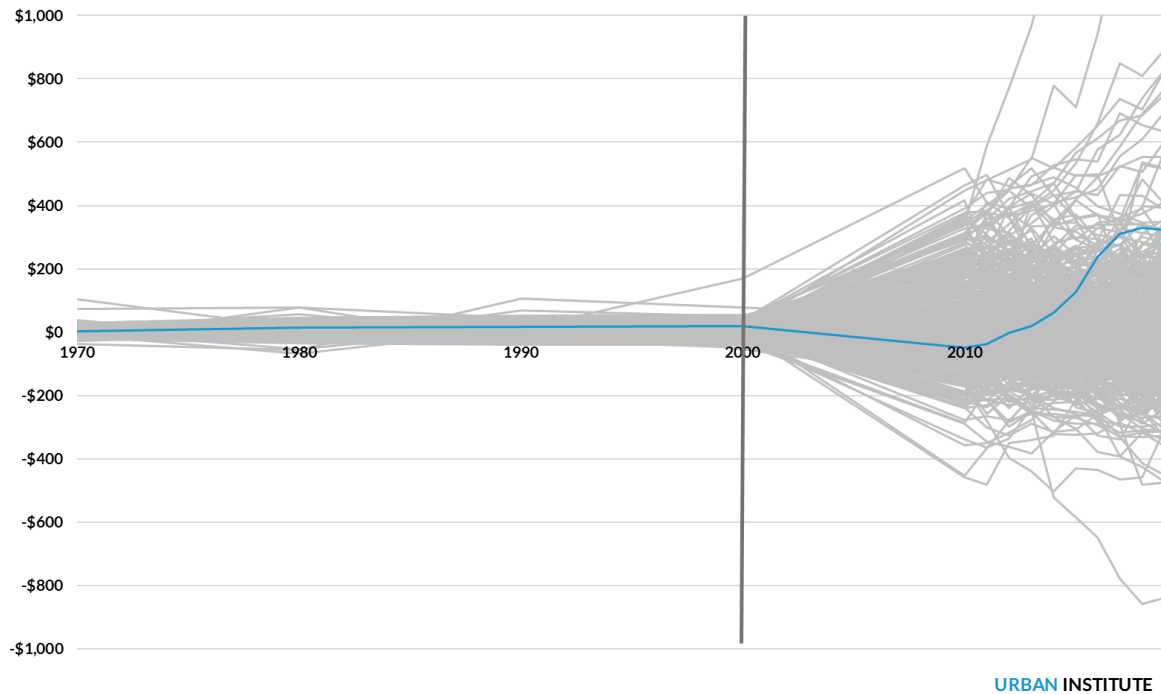


Sources: 1970, 1980, 1990, and 2000 Decennial Censuses and 2006–10 through 2015–19 American Community Surveys.

Note: Figure indicates differences between the project area and its synthetic control (blue line) and each placebo and their synthetic controls (gray lines).

FIGURE 1I

East Baltimore Development Initiative Outcomes for Gross Rents



Sources: 1970, 1980, 1990, and 2000 Decennial Censuses and 2006–10 through 2015–19 American Community Surveys.
Note: Figure indicates differences between the project area and its synthetic control (blue line) and each placebo and their synthetic controls (gray lines).

Discussion

Social reformers have been motivated for many years to upgrade neighborhoods of economic exclusion. Recognizing the complexity of the challenges involved, a wave of initiatives is seeking to revitalize neighborhoods in ways that are more comprehensive and sustained than in previous eras. These initiatives typically address neighborhoods in both their built environment and human fabric—social, familial, educational, and occupational characteristics. They involve partners from multiple sectors.

Neighborhood renewal is an oft-discussed objective among policymakers and philanthropists. Witness the creation of Opportunity Zones, Choice Neighborhoods, and Promise Neighborhoods at the federal level in the past decade. Neighborhood renewal has appeal despite a surprisingly limited number of case studies of successful revitalization across the US. The number of sustained, intensive, localized revitalization efforts is perhaps just three dozen (Ferris and Hopkins 2015; Kubisch et al. 2010; Martinez-Cosio and Bussell 2013; Turner et al. 2014).

Challenges to Revitalization

That sustained, intensive neighborhood revitalization is often discussed but infrequently tried reflects the weighty challenges involved. Selecting one area to receive outsized public-sector investment is hard in a democracy and especially in one with racial prejudice. This challenge is made more complex as initiatives often need to continue through successive local and gubernatorial administrations, each of which may articulate new areas of priority.

Philanthropy has fewer constraints and can provide the patient backstop needed for a successful initiative. But few philanthropies have pockets deep enough to support a revitalization effort over time, and few are willing to invest deeply in one area, preferring to spread resources more broadly. Anchor institutions such as universities and hospitals represent likely candidates, and we can point to meaningful examples of local engagement, but they, too, have bottom lines and institutional priorities, which are not always in line with those of local residents (Perry and Wiewel 2005).

Neighborhood revitalization is also difficult because change is hard (Bouton 2014), so, too, for residents that initiatives seek to help. Whether in workforce training, financial education, homelessness services, or addiction treatment, program evaluations indicate that even the most well-designed and implemented efforts struggle to help individuals and households facing multiple barriers. Change is often moderate and incremental. Structural elements such as racism prevent or slow progress. Revitalization initiatives work in communities facing these same structural obstacles and with the same human service programmatic elements that have mixed results—mentoring, coaching, case management, apprenticeships, tutoring, savings incentives, and the like.

If person-centered investments are challenging to translate into neighborhood-level gains, so are physical investments. Changes to a neighborhood's built environment can appear more straightforward than social changes. And such changes can be well justified. Inadequate housing, abandoned commercial strips, and antiquated schools communicate to residents that they are of little value. But improved buildings, streets, and parks may not improve lives or livelihoods, as the theory of change is not always immediate or clear.

Even with “bricks and sticks” investments by comprehensive community initiatives, it is hard to attract market-driven investment. More likely, an initiative will fail to attract enough market investment than it will attract too much. When public- and philanthropic-sector resources run dry, market forces may still not be ready to invest. (See, for example, the failed revitalization work in the Sandtown-Winchester neighborhood in Baltimore [Rosenblatt and DeLuca 2017].) For a

neighborhood to function well, it should be integrated into the broader regional labor, transit, and housing markets.

Revitalization efforts may, however, prove too successful in attracting market-rate investment. Appreciating home prices and rents may displace the residents the initiative sought to aid. But even if residents can remain in the neighborhood as it upgrades, losses of political and social capital balance against potential gains to public safety or education quality. The evidence on the effects of gentrification is still growing, but some authors are skeptical of the benefits of the proximity of high-income residents to low-income ones (Chaskin and Joseph 2015; Hyra 2015).

Revitalization is further challenged by the reality that people are highly mobile. One study of a cross-site neighborhood change effort *without* significant relocation still found that 57 percent of residents had left within three years (Coulton, Theodos, and Turner 2012). Residents may not remain to benefit from neighborhood improvements. Conversely, residents who see their economic standing improve because of the initiative may move away from a distressed neighborhood, meaning that even if services have their desired effect, it may not be possible to observe changes in neighborhood poverty or employment levels.

Summarizing Findings

I find that the East Baltimore community, relative to a comparison, initially resulted in significant population decreases but now has equivalent population levels to the counterfactual. The neighborhood did not experience change in its racial composition as a result of the initiative. Rates of bachelor's degree holders are trending up for the community, but not yet statistically significant. It does appear that the intervention resulted in increased average monthly rents relative to the counterfactual and lower homeownership rates (higher rental rates). Incomes, poverty rates, and home values did not change relative to the counterfactual.

Are the results observed in this study encouraging or disappointing? There are elements of both. The East Baltimore Development Initiative initially caused significant population losses, though those levels recovered in recent years. The neighborhood's economic standing—as measured by incomes, poverty rates, and home values—was little changed relative to the counterfactual. But average rents are trending up (although the initiative has still built subsidized senior and family rental housing). Ownership rates are down, reflecting changes in the built environment. The number of college degree holders appears to be trending up but is not yet statistically significant.

One question for the initiative is what share of residents will ultimately come back to the area to benefit from the redevelopment and how well are they faring if they do not. The answer appears

to be less than half will return, and perhaps less than a quarter. Others appear to be taking note of this, and designing more incremental approaches, such as building, relocating, and demolishing in cycles to allow residents to remain nearby. For example, the Perkins Homes redevelopment—the Choice Neighborhoods project south of the EBDI project area—is adopting this approach to try to retain residents in the newly built community.

If others are learning from the East Baltimore Development Initiative’s failings, can the positive aspects of the initiative’s model similarly be spread to other neighborhoods in Baltimore? Apart from a few distressed communities adjacent to areas of market strength, there are no strong grounds for optimism. Baltimore has not fixed its decades-long economic decline and has continued to lose population.

EBDI’s original and continued existence is owed to the backing of Johns Hopkins University. And although the university claims that the development has been a win-win (or, in the words of President Daniels, the university has operated out of “enlightened self-interest”³⁰), it is hard to envision the university taking so robust a role in more distant neighborhoods. Baltimore has other anchor institutions and some well-endowed philanthropies, of course, and they may well support redevelopment work in one or more communities. The Perkins Homes redevelopment is evidence that public funds can coalesce around new revitalization work. But it is also evident that those funds are rare and they are accruing to a neighborhood that, while containing many poor residents, also has proximity to areas of strong commercial and residential market demand.

Baltimore has experienced a number of commitments and plans for equitable development, including the city’s Framework for Community Development and the Annie E. Casey’s and other local foundations’ investments in human services and capacity building. But some observers believe these efforts are not sufficient to address the city’s challenges (Stoker, Stone, and Worgs 2015).

Elements of Success

In learning from the East Baltimore Development Initiative and others like it, what factors are useful to consider for future revitalization initiatives? I explore 10 thematic and emergent findings.

Resident mobility and benefits from the redevelopment. Not everyone gains equally from government and nonprofit services and support, especially ones as complex as those offered by comprehensive community interventions. But one key measuring stick for community revitalization is how it has benefited the residents living there before the initiative began. This neighborhood-level study is not directly set up to answer the question, but it does document that significant relocation occurred, and populations have shifted significantly over the life of the East Baltimore Development Initiative. Not all families may want or be able to return to the redeveloped

neighborhood, but having a strong theory of change for how all residents can benefit is an important first step in designing a successful initiative.

Committed local partners. Comprehensive community initiatives require strong local partners who are committed over the long term. As was true for the case study here, ideally multiple partners will be invested in the effort, including philanthropic and local political power structures. Initiatives can benefit from a local anchor institution that cannot leave the area. These institutions are less likely to lose interest in revitalization.

Sufficient scale. The East Baltimore Development Initiative attracted, facilitated, or directly invested more than \$1 billion and is not complete. Successful neighborhood revitalization is expensive. Replacing a single multistory building can cost tens of millions of dollars or more, and many communities have entire blocks that require attention. Not all resources need to be philanthropic, as market-rate tenants and buyers can help. Human services are expensive as well, if they are done in a manner that is sufficiently robust and of high quality. Achieving financial contributions from multiple parties is a must for a sustained initiative. Even an initiative backed by wealthy university and foundation support relied on public-sector funding. A school system paid costs to run a new school. Significant additional funding beyond that normally accessed by the neighborhood was required.

Resident decisionmaking and buy-in. Full buy-in does not appear to have been present at the beginning of the East Baltimore Development Initiative. The most controversial element of the initiative was related to relocation. One challenge is the frequent heterogeneity of views in neighborhoods, so residents may not speak with one voice (nor should they be expected to). But it is possible for future initiatives to engage residents more deeply in design thinking before the intervention is formed and over time with genuine leadership and initiative-shaping opportunities.

A long time horizon. The East Baltimore Development Initiative is notable in the length of time it has been active. Future initiatives will need to recognize the considerable time it takes to change a community. Ten years will likely not be enough. It will be better to think about a 20- or 30-year time horizon.

Human services. The East Baltimore Development Initiative included human service supports. It will be necessary to conduct more person-level longitudinal studies to assess whether and how such supports benefited residents. But we do see that given relocation and general mobility patterns, human services may not necessarily translate into neighborhood-level impacts. Conversely, if an initiative wishes to improve the livelihoods and well-being of incumbent residents, it is logical to conclude, as this initiative did, that a successful strategy will require bringing high-quality service

providers to the neighborhood, especially to help with employment, finances, housing, and mental and physical health. Also, initiatives will need to develop strong referral networks to send residents to high-quality providers outside the project area (but that are still accessible to it). This study could not tease out the effects of some supports versus others. But not all services are effective, so successful initiatives will need to incorporate tested strategies with high-performing organizations.

Built environment. EBDI made notable changes to the physical makeup of the neighborhood it sought to improve, building or supporting the development of stores, office space, housing, and recreational facilities. These elements of the built environment are beyond the scope of the East Baltimore Development Initiative, but they can act to isolate the community because of limited foot traffic and connection between East Baltimore and other areas of town. Improvements to the built environment will be needed alongside the services, given prior disinvestment.

Proximity to market strength. The East Baltimore Development Initiative project area had some proximity to areas of greater market strength, but also to areas of considerable disinvestment. Proximity to areas of market strength can help attract follow-on market investment. The sums required to revitalize an area can exceed the total public and philanthropic funding available, creating a need for market capital. It may be that a city and metropolitan area's broader market strength matters in addition to the intervention. In weak or declining areas, local revitalization initiatives may struggle to achieve their aims, or such efforts may require additional public and philanthropic capital relative to scarce market capital.

Retaining control of land. A lot can change in the 20 to 30 years that a comprehensive community initiative is active. That was the case in Baltimore. Even though the initiative did not increase home values and rents, housing affordability is a growing issue. Maintaining control of land can be an effective tool to preserve affordability if a neighborhood becomes attractive to investors. Community land trusts or long-term deed restrictions can preserve affordability over successive generations of homeowners and renters and can be used for commercial properties, too (Theodos et al. 2019).

Adaptations. The East Baltimore Development Initiative adapted along the way. Few could have foreseen the shape of the past nearly two decades in Baltimore. Strategies will need to continue to adapt to changes (or a lack thereof) on the ground.

Limitations and Areas for Further Research

Community revitalization initiatives can vary widely in their local context and need, institutional strength, actors involved, resources committed, and strategies adopted. This research has advanced what is known about the effects of an initiative on local economic, demographic, and housing

conditions, but many initiatives have not been studied in this manner. And this research leaves unanswered several additional questions. Areas for further research are as follows:

1. The field could benefit from additional quantitative case studies of other revitalization initiatives and their effects on local areas. It would be helpful to explore other geographies with different demographic and economic conditions, with different regional structures, and in different macroeconomic cycles. Local effects would then ideally be empirically related to the interventions' approaches, dosages, and starting points.
2. It would also be possible to conduct an analysis similar to this one on tracts adjacent to those targeted by comprehensive community initiatives. Such research would show how effects decay across space.
3. Future work can explore relevant outcomes that this study was unable to include. Such work might include factors relevant to crime, education, college enrollment, access to medical care, parks and recreational facilities, grocery stores, or other retail options. These data can be challenging to collect, but for some, coverage has improved in recent years, so initiatives that began after the one studied here may be more promising for assessment along these lines. Additionally, if accessing data for multiple cities in comparable ways is difficult (as with, for example, crime statistics), it would still be possible to use a single city or county to create the donor pool and assess the impact of an initiative in that way.
4. This study does not establish whether and how original residents benefited from the revitalization initiatives. Neighborhood-level changes could result from in- and out-migration, not just changes for residents themselves. And some research shows that mobility is a more important factor in neighborhood-level change than changes in the lives of residents who remain (Coulton, Theodos, and Turner 2012). Additional research is needed to understand whether and how original residents benefit and along which dimensions. Resident-tracking studies will likely be required to answer these questions, and such efforts are expensive. Administrative data can sometimes be used for these purposes, as in Reid's forthcoming study of the HOPE SF public housing revitalization effort in San Francisco, though this approach is more possible in settings where residents are part of a system or program that is already tracking resident outcomes.
5. A further area of research concerns the mix of services involved. Additional studies could help establish which service components are most beneficial to residents and how that may vary by subgroup. Such studies can help practitioners and policymakers peer into the "black box" of comprehensive community initiatives. It will be helpful to understand whether any services unlock additive benefits when received in combination than when provided

separately. For example, there is growing interest in “two generation” services that pair supports for parents and children, though little research tests the efficacy for these approaches (Lombardi et al. 2014).

6. Practitioners and policymakers could benefit from a better understanding of the level of resources required to achieve community revitalization and how those resources may depend on market conditions. Also of use would be a better understanding of tipping points needed to attract market-rate rather than philanthropic investment.
7. Finally, additional qualitative case study research is called for. Qualitative studies are best positioned to explore what makes for successful implementation and where implementation failure arises. It would be useful to explore how to sustain coalitions of support and how to engage residents in decisionmaking. Also important is research on quantifying levels and thresholds of public investment that will be required to leverage enough private investment.

Conclusions for Policy

Given what is and what is not known about community revitalization initiatives, what should policymakers concerned about neighborhood environments do? A handful of implications emerge from the study’s findings. First, the public sector was not the principal driver of the East Baltimore Development Initiative. But the initiative could not have proceeded without robust local, state, and federal funding. With the notable exception of COVID-19 stimulus efforts, we are still in an era of federal austerity, in which funding for the Community Development Block Grant program, for example, has been cut by 80 percent since its peak (Theodos, Stacy, and Ho 2017), and federal resources compose a smaller share of local government spending. An implication then is that to reach more neighborhoods, additional and sustained public resources will be needed.

An additional implication is that philanthropy and anchor institutions can provide the stable backstop needed to change communities over many years, as public officials come and go. But public programs can do more to include mechanisms of resident input and control. These processes are relatively weak in many of the federal programs on which community development relies. Other conditions—such as mandatory build-back requirements for public housing revitalization funds—can help better ensure that incumbent residents benefit from neighborhood investments.

A third implication is that the public sector can do more to lay the groundwork for comprehensive community initiatives. That includes reimagining programs that support neighborhood planning processes. It includes combining financial expertise, human service

expertise, community engagement expertise, and management and learning expertise. It also means working to align resources—including transportation and infrastructure—with local initiatives.

A final implication is that change is hard, takes time, and requires patience. Funding commitments longer than those provided by annual appropriations channels or grant cycles can help create the longevity to accomplish neighborhood change.

Given what we now understand about the importance of neighborhoods for children, and given the examples we can point to where robust revitalization efforts have been created and sustained, these initiatives require deep commitment and must contain the ingredients necessary for success, with a greater emphasis on outcomes for incumbent residents. And many of America's neighborhoods will need smart, entrepreneurial problem solvers who can harness local resources, mobilize philanthropic and public-sector capital, and implement a long-term, patient, adaptive, and robust strategy of community revitalization.

Notes

- ¹ See Richard Rothstein, “From Ferguson to Baltimore: The Fruits of Government-Sponsored Segregation,” *Working Economics Blog*, April 29, 2015, <https://www.epi.org/blog/from-ferguson-to-baltimore-the-fruits-of-government-sponsored-segregation/>.
- ² See “Mapping Inequality: Redlining in New Deal America,” accessed July 6, 2022, <https://dsl.richmond.edu/panorama/redlining/>.
- ³ Siddhartha Mitter, “Gentrify or Die? Inside a University’s Controversial Plan for Baltimore,” *Guardian*, April 18, 2018, <https://www.theguardian.com/cities/2018/apr/18/gentrify-or-die-inside-a-universitys-controversial-plan-for-baltimore>.
- ⁴ According to the most recent Census Bureau data, just 8.1 percent of Baltimore’s residents are foreign born, well below the US average of 13.6 percent. Of the 30 largest cities, only Detroit, Louisville/Jefferson County, and Memphis have a lower share of residents who are foreign born than Baltimore.
- ⁵ Dax-Devlon Ross, “The Great East Baltimore Raze-and-Rebuild,” *Next City*, July 29, 2013, <https://nextcity.org/features/view/the-great-east-baltimore-raze-and-rebuild>.
- ⁶ Eric Siegel, “East Side Loses Ground in Effort to Stem Blight,” *Baltimore Sun*, October 15, 2000, <https://www.baltimoresun.com/news/bs-xpm-2000-10-15-0010150162-story.html>.
- ⁷ See Stoker, Stone, and Worgs (2015) for a detailed history of Baltimore’s neighborhood policies.
- ⁸ The East Baltimore Development Initiative has at times been referred to as the East Baltimore Revitalization Initiative.
- ⁹ “East Baltimore Development Initiative,” Office of the President, Johns Hopkins University, accessed July 6, 2022, <https://president.jhu.edu/anchor-initiatives/east-baltimore-development-initiative/>.
- ¹⁰ Melody Simmons and Joan Jacobson, “Too Big to Fail? Betting a Billion on East Baltimore,” *Daily Record*, January 31, 2011, through February 4, 2011.
- ¹¹ Meredith Cohn, “After Years of Promises, Some Residents Finally Return to Their East Baltimore Neighborhood. Can It Rebound?” *TCA Regional News*, November 15, 2018, <https://www.baltimoresun.com/business/real-estate/bs-bz-east-baltimore-redevelopment-20181017-story.html>.
- ¹² Lorraine Mirabella, “Starbucks to Open Shop with a Training Focus in East Baltimore,” *Baltimore Sun*, September 28, 2016, <https://www.baltimoresun.com/business/bs-bz-starbucks-baltimore-concept-20160928-story.html>.
- ¹³ Alissa Gulin, “Taking Care of East Baltimore Neighborhood,” *Daily Record*, November 19, 2013.
- ¹⁴ “Cheryl Washington on Rebuilding East Baltimore and Its Future,” *CaseyCast* (blog), Annie E. Casey Foundation, May 29, 2019, <https://www.aecf.org/blog/cheryl-washington-on-rebuilding-east-baltimore-and-its-future-podcast/>.
- ¹⁵ Cohn, “After Years of Promises.”
- ¹⁶ Interview with Cheryl Washington, October 2018.
- ¹⁷ “The Value of the Times: Reshaping Baltimore City Middle East Neighbourhood,” accessed July 6, 2022, <https://www.arcgis.com/apps/MapJournal/index.html?appid=0f554b58962b424195e6ab744bbc931>.
- ¹⁸ “East Baltimore Development Initiative,” Office of the President, Johns Hopkins University.
- ¹⁹ “Washington on Rebuilding East Baltimore.”

- ²⁰ For a copy of the plan, see EBDI (2017a) or EBDI (2017b).
- ²¹ “Economic Inclusion,” EBDI, accessed July 6, 2022, http://www.ebdi.org/economic_inclusion.
- ²² “Economic Inclusion,” EBDI.
- ²³ “East Baltimore Development Initiative,” Office of the President, Johns Hopkins University.
- ²⁴ “East Baltimore Development Initiative,” Office of the President, Johns Hopkins University.
- ²⁵ Melody Simmons and Joan Jacobson, “Baltimore Finds Funds for EBDI TIF,” *Daily Record*, September 18, 2011, <https://thedailyrecord.com/2011/09/18/baltimore-finds-funds-for-ebdi-tif/>.
- ²⁶ See the website for the Baltimore Food Hub at <http://www.baltimorefoodhub.com/>; and Brittany Britto, “Baltimore Food Hub Is Slated to Open Brewery, Food Hall and Market before 2021,” *Baltimore Sun*, October 5, 2018, <https://www.baltimoresun.com/maryland/baltimore-city/bs-md-ci-east-baltimore-renovations-20190123-story.html>.
- ²⁷ Mitter, “Gentrify or Die?”
- ²⁸ “Perkins Somerset Oldtown Transformation Plan,” https://www.crossstpartners.com/wp-content/uploads/PSO-one-pager_low-res-1.pdf.
- ²⁹ I calculate this using Galiani and Quistorff’s *synth_runner* Stata package (Galiani and Quistorff 2017).
- ³⁰ Mitter, “Gentrify or Die?”

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About the Author

Brett Theodos is a senior fellow in the Metropolitan Housing and Communities Policy Center at the Urban Institute, where he directs the Community Economic Development Hub.

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