Leveraging Main Street as a Real Estate Amenity: Downtown Revitalization and Residential Property Values

Andrew J. Van Leuven
Oklahoma State University,
Department of Agricultural Economics
andrew.vanleuven@okstate.edu

February 2022

Abstract

As part of their efforts to reverse the effects of twentieth-century downtown disinvestment and automobile-oriented development, stakeholders in small towns across the United States look for viable means of restoring the vitality and character of their historic business districts. In this paper, I evaluate a widely adopted downtown revitalization strategy—the Main Street Program—by measuring its influence on the local housing market. I find that home sale prices are higher for residential properties sold in program-participating communities, and I observe an additional sale price premium for homes located in closer proximity to downtown districts with an active Main Street Program.

Keywords: *revitalization, downtown, property values, economic vitality, rural, real estate*

This is the final version of the working paper for this study. Please **click here** to access the version published by the *Journal of Planning Education and Research*.

Special thanks to the OSU Center for Real Estate for its generous funding of this project and to First American Mortgage Solutions, which provided its assessor dataset free of charge.

1. Introduction

Saturated by a landscape of sprawl and car-oriented retail development—shopping malls, big-box stores, massive parking lots, and roadways unsuitable for pedestrians—many small towns view their historic town centers as an untapped source of competitive advantage within the larger region. Planners and policymakers envision their downtown district as a unique environment with the potential to provide a differentiated retail and entertainment experience for local residents and out-of-town visitors. However, many such communities must confront the reality that their downtown business districts are outdated and uninviting, blighted by decades of disinvestment. In order to leverage downtown as an economic development asset and a place of public expression (Rypkema, 2003), community members must work to restore its public spaces, local businesses, and reputation.

Downtown revitalization—the process of bringing blighted and underserved urban districts back into full use—often conjures an image of large industrial cities, but it has also become a common approach in *non-metropolitan* areas (Faulk, 2006; Robertson, 1995). Designed to equip smaller communities with the resources and practical knowledge to leverage their historic retail districts as an economic development asset, the Main Street Program is one of the more common revitalization strategies found throughout communities in the non-metropolitan United States. However, very little evidence exists to verify whether the program produces its intended effect.

While there are numerous criteria by which revitalization efforts may be evaluated, this study explores the relationship between a community's participation in the Main Street Program and changes in single-family home sale prices during the years following program adoption. To accomplish this, I implement a hedonic price model which estimates the share of residential property sale prices that can be attributed to the presence of an active Main Street Program in the community and the property's proximity to "downtown" (i.e., central business district). The following section provides a brief history of the Main Street Program and lays out a framework that justifies the use of residential property sales as an operationalization of economic vitality. In the remainder of the manuscript, I describe my data sources and empirical strategy, provide a detailed examination of my results, and conclude with a discussion of the findings and their implications for planners, community developers, and researchers.

2. Background & Motivation

2.1 Downtown Districts in the Rural Midwest

In this paper, I use the term "downtown" to describe the locale in which a community's built environment has higher building densities, higher concentrations of pre-automobile civic and commercial development, and an elevated—relative to the rest of the built environment—orientation toward pedestrians. However, while the above definition encompasses most central business districts across the globe, the typical downtown in the nonmetropolitan Midwest exhibits attributes and behav-

iors that may appear quite peculiar to planners and policymakers unfamiliar with the rural United States. As noted by Hohenberg and Lees (1995), while locations further from the city center in European cities are typically poorer than those close to downtown, the opposite is true in the United States. A key reason for this difference is the reality that—in most U.S. towns and cities—historic amenities (usually located downtown) are not maintained, and *modern* amenities (restaurants, theaters, infrastructure, etc.) are dispersed throughout the greater metropolitan region rather than concentrated in the city center (Brueckner et al., 1999). While attributable to a wide variety of economic and historical factors (Bradbury et al., 1982; Downs, 1999; Angel, 2012), such differences in density are in large part driven by the process of suburbanization and sprawl.[1]

Although most international comparisons of US downtowns focus on large cities, the key distinctions remain the same for downtowns in rural areas. For the 207 municipalities observed in this study, the bivariate relationship between downtown proximity and home sale price is negative: for every 1/8 mile—approximately one city block—*closer* to downtown, the average home sale price decreases by around $3,800 (or $1.52 per square-foot). Thus, when discussing the ability of downtown revitalization efforts to transform rural downtowns into a real estate amenity, the expectation for most planners and policymakers is that they must contend with the structural impediment of a spatial price gradient skewed against downtown proximity. As such, in this study I expect the influence of the Main Street Program to be felt as a lessening or reversal of this gradient in communities that adopt the program.

2.2 The Main Street Program

The Main Street Program (MSP) was launched in 1977 by the National Trust for Historic Preservation to assist communities in revitalizing their historic commercial districts. It is designed around four "transformation strategies"—design, promotion, organization, and economic vitality—which help to revitalize and strengthen local downtown retail districts by capitalizing on their aesthetic and historical value.[2] Upon adopting the MSP, communities hire a program director to coordinate revitalization efforts, which include hosting events, guiding property owners through the application process for preservation grants and tax credits, providing technical assistance to business owners, and acting as a facilitator within the networks of the local small business community. While program directors occasionally work with small amounts of state or federal grant money, their largest asset is the coalition of local stakeholders who care deeply about their community's long-term pros-

[1] While the outlying areas of rural municipalities are typically not referred to as "suburbs," they still mirror the pattern of "sprawl" development (see Brueckner, 2000; Galster et al., 2001) exhibit by metropolitan suburbs. The process of "suburbanization"—the relocation of residential and commercial activity (in lockstep with consumer preferences) from the traditional downtown area toward the periphery—is what largely caused residential properties in downtown to be vacated in the latter half of the twentieth century (Abbott, 1993).

[2] See Appendix A for more information about the MSP's "transformation strategies" as implemented by the National Main Street Center. Appendix B includes information about the MSP-participating communities throughout Ohio and across the US.

perity and consequently decide to volunteer their time and resources toward helping to revitalize downtown.

However, the actions and coordinated efforts undertaken by the MSP director and community volunteers are not a direct guarantee of successful revitalization. Of the four transformation strategies of the MSP, design, promotion, and organization are all components that can be directly influenced by community MSP implementation efforts. However, the remaining component of the program's approach, economic vitality, is something that fundamentally requires cooperation from outside actors—namely the private sector—to be successfully achieved. While design, promotion, and organization are all outputs (i.e., activities that individuals can perform), economic vitality is an outcome (i.e., the *result* of collective outputs, as well as larger political forces and macroeconomic trends). This distinction may explain why a majority of previous research on the MSP has avoided evaluating long-term outcomes (Robertson, 2004) which require much more than a simple tally of dollars spent or volunteer hours logged.

In this paper I focus on residential property sale prices as a means of observing the long-term economic influence of the MSP. In the paragraphs below, I offer three explanations that motivate the use of local housing market outcomes as a measure of local economic vitality.

2.3 Downtown as a Differentiated Consumption Environment

A vibrant downtown offers a differentiated retail and entertainment experience for local residents and visitors. By beautifying the streetscape and hosting events, the MSP director and volunteers attempt to transform the historic business district into a *destination* for families, tourists, and shoppers. Downtown is typically a city's most dense location, in terms of both firms and individuals, and is an ideal location for consumer amenities (Glaeser and Gottlieb, 2006). Downtown-proximate housing prices are thus likely to capture the value of nearby consumer amenities, especially when downtown also contains "built heritage" assets (Ahlfeldt and Maennig, 2010) such as a historic monument or religious site.

In terms of both presence and quantity, downtown amenities for metropolitan areas differ in from those in small towns (Howie et al., 2010), especially since smaller downtowns typically do not experience high pedestrian activity during all hours of the day. Nevertheless, this difference does not necessarily mean that small downtowns do not generate consumer amenities for nearby residents. Filion et al. (2004) note that—while only a handful of smaller downtowns are "lucky" enough to benefit from anchored assets such as a nearby university—revitalization efforts can nonetheless improve a small community's likelihood of leveraging its historic downtown district as an amenity for its residents.

Downtown revitalization efforts attempt to transform downtown into a more appealing destination: a vibrant "third place" (Oldenburg and Brissett, 1982) where visitors can spend their time outside

of their homes and workplaces. Furthermore, the "pedestrianization" of downtown—incrementally replacing empty sidewalks and automobile traffic with pedestrian traffic and social interaction—can be a positive feedback loop: the more the MSP can portray downtown as the vibrant "place to be," the more visitors it will attract, further reinforcing its prominence in the collective psyches of those who live and work nearby (Robertson, 1993). Furthermore, because the MSP often facilitates in creating new business establishments and jobs inside the downtown district (Van Leuven, 2021), vacant storefronts are brought into use, reducing blight and adding to the growing sense of vibrancy. The success of this effort should thus be captured in the sale prices of nearby homes, with a premium placed on nearby access to the historic downtown district as a consumer amenity.

2.4 Downtown as a Historic Preservation Landmark

Central to the MSP is its emphasis on historic preservation and design. Compared to shopping malls and big-box stores—embodiments of the automobile era—historic properties offer a source of competitive advantage for downtown, as their authenticity is "marketable in an environment that all too often features routinized and formulaic development" (Sohmer and Lang, 2001). Listokin et al. (1998) state that preservation activities can enable communities to capitalize on their historic legacy as an asset for redevelopment.

The link between property values and historic preservation has been extensively studied by planners, economists, and architects (see Ryberg-Webster and Kinahan, 2014). Using evidence from cities in Texas, Leichenko et al. (2001) found that historic designation was highly associated with higher home values.[3] This general finding is confirmed or replicated in several studies (Noonan, 2007; Clark and Herrin, 1997; Ford, 1989) with a few key exceptions (Asabere et al., 1994; Been et al., 2016). In their study of historic Memphis neighborhoods, Coulson and Lahr (2005) found that homes in officially designated historic neighborhoods sold for higher than their non-designated equivalents. (Schaeffer and Millerick, 1991) also observed that national historic designation positively affected property values, but they found that designation at the local level had a negative impact, which they attribute to the local preservation agency's higher regulatory burden. McCabe and Ellen (2016) found that historic designation increased neighborhoods' socioeconomic status, noting that the economic revitalization gains generated from historic preservation are mostly felt by higher-income residents.

The mostly symbiotic relationship between historic preservation and residential property values serves as a second rationale for the hypothesis that the MSP may positively influence the sale price

[3]While they are related to one another, historic preservation and downtown revitalization are not the same phenomena. Historic preservation— the process of designating, protecting, and improving historically significant buildings and landmarks—may be used as a tool to increase economic vitality, but there also exist a variety of non-economic motivations for conservation which extend beyond the goal of revitalization. Indeed, while historic designation often generates a market premium for heritage assets, it may come at the expense of a community's broader potential for economic growth (Been et al., 2016).

of houses located near downtown. The program—while not an official historic preservation entity—prioritizes investing in *existing* assets (rather than new development) and attempts to cultivate a welcoming atmosphere and design aesthetic that captures the community's heritage. As such, it is reasonable to expect that the sale price of nearby houses may reflect the value of historic buildings and landmarks revitalized throughout the town center.[4]

2.5 Downtown as a 'Walkable' Alternative to Car-Oriented Development

Dynamic, economically revitalized retail corridors provide an alternative to the automobile-oriented development associated with decentralization and sprawl (Duany et al., 2001; Speck, 2013). In contrast to the car-dependence and poor accessibility of low-density development (Hamidi et al., 2015), pedestrian-oriented built environments allow homeowners to complete everyday errands—at destinations such as the grocery store, post office, and salon—without needing to use a personal vehicle.

As defined by Pivo and Fisher (2011), walkability is the degree to which "an area within walking distance of a property encourages walking for recreational or functional purposes." By measuring walkability in terms of residential proximity to parks and "neighborhood commercial land uses," Song and Knaap (2004) found a positive relationship between house prices and walkability in predominately mixed-use neighborhoods but *not* in majority single-family residential neighborhoods. Rauterkus and Miller (2011) identified a positive relationship between walkability and land values, finding that the effect reverses in more car-dependent neighborhoods. Li et al. (2015) also found that planning efforts to increase walkability do not increase property values in car-dependent neighborhoods, but that they do positively influence values in already-walkable neighborhoods. These studies suggest that homeowners' appreciation of walkable residential environments is contextual on the historical roots of the local built environment. In other words, homebuyers searching in sprawling, car-dependent neighborhoods are unlikely to highly value walkable development. However, homebuyers searching in the older, denser parts of town may be willing to pay a "walkability premium" (Yin et al., 2020) in order to live within walking distance to a newly revitalized downtown.

For the segment of prospective homebuyers with a preference for walkable living, the MSP also represents a boon with regards to public safety. As described above, the process of "pedestrianization" (Robertson, 1993) helps people feel safer when walking around the downtown district. Furthermore, perceptions of pedestrian safety are often much higher in busy commercial corridors with an elevated sense of community and place (Jamme et al., 2018). In its efforts to increase foot traffic—and thus enhance the "eyes on the street" (Jacobs, 1961)—a successful Main Street Program can make a

[4]Due to data availability constraints, I do not control for historic preservation designation in this study. However, all observations in the analysis are located in communities with a pre-automobile-era downtown district. I also control for property age in the hedonic price model.

community's walkable downtown district feel safer, more protected from the threats, both real and perceived, of vehicular hazards and violent crime.

Demand for walkability is also dependent on consumer preferences. Although a preference for decentralized, car-oriented development is the overwhelming norm in the U.S. (Kolko, 2020), there is still a strong demand for walkable neighborhoods among various segments of the population. As public health outcomes are higher in walkable areas with accessible "gridded street networks" (Kelly-Schwartz et al., 2004), it is unsurprising that that older home buyers prefer denser, more walkable housing options (Myers and Gearin, 2001). Frank et al. (2019) observe that walkable neighborhoods, while not a majority preference, are nonetheless *under-supplied* relative to demand. They suggest that real estate developers have yet to embrace "unmet demand" for walkable development because of its higher risk and capital cost relative to automobile-oriented development. By taking the initiative to start beautifying downtown and rehabilitating derelict buildings, the MSP may provide the "nudge" that residential developers need to start meeting this demand. If successful, the added (or newly refurbished) walkable downtown development would then bolster the value of downtown as a real estate amenity.

2.6 Property Values as a Practical Measure of Local Economic Vitality

Taken together, the three previous sections illustrate the potential of "Main Street" as an amenity which home buyers—with a particular set of preferences—are likely to pay a premium for. Previous research identifies the positive effects of both commercial development (Aydin et al., 2011; Rącka et al., 2017) and neighborhood revitalization (Ki and Jayantha, 2010) on nearby residential property values, but these studies focus chiefly on highly populous cities in metropolitan areas. This study contributes to the literature by examining the relationship between downtown revitalization efforts and residential property values in a *non-metropolitan* context.

Non-metropolitan planning and economic development efforts are certainly different in from their metropolitan counterparts (Hibbard and Lurie, 2019), but the MSP is, by design, strongly compatible with the needs of smaller communities. In describing the difference between downtown districts of small towns versus large urban areas, Robertson (1999) noted that smaller downtowns are more "human scaled," and have a unified, single locus of social, commercial, and civic activity. The MSP is designed around the heightened importance of sense of place in smaller communities, which shapes residents' identities, social connectedness, and "way of life" (Frank and Hibbard, 2017). Moreover, unlike many economic development programs which focus on pure economic outcomes, the MSP's multi-faceted revitalization approach uses place prosperity (see Bolton, 1992) as a benchmark for success.

In this paper, I examine the ways in which the MSP transforms non-metropolitan downtown districts into amenities valued by local homeowners. While most economic development policy analyses focus on *labor market* outcomes (such as wages and jobs), property transaction prices may also

serve as a valid measure of local economic vitality. While increased house prices are not always an unalloyed good,[5] they nonetheless "play an important role" in the overall economic growth and productivity of a region (Miller et al., 2011). This study's focus on home sale prices is motivated by the role they play as an *indicator of change* in the valuation of an amenity. When the MSP is implemented successfully, community stakeholders transform their undervalued downtown district—already replete with historic properties and walkable streetscapes—into a safer, more vibrant "third place" for shopping, entertainment, and social gathering. As such, I hypothesize that a community's participation in the Main Street Program increases the value of downtown as a consumer amenity and is thereby associated with an increase in the capitalized value of properties closer to downtown.

3. Data

In order to quantity the relationship between property values and MSP adoption, I combine multiple data sources to create a pooled cross-section of yearly home sales in non-metropolitan Ohio communities from 2000 to 2019. Property data—including transaction date and price, geographic location, and structural characteristics—originate from First American DataTree (2020). As recommended by (Huh and Kwak, 1997), the variables selected in this study's analysis reflect the "regional and cultural characteristics" that are relevant to downtown revitalization in a nonmetropolitan context. Table 1 displays summary statistics for the key variables used in the analysis.[6]

To control for neighborhood characteristics, I use several variables from the US Census at the block group level. Because data at the block group level are only reliably available from the decennial census, each property was assigned neighborhood variables according to the decade in which the transaction took place. The final source of data was the year when each community's implementation

[5]Marked increases in local house prices may serve as a signal of successful economic revitalization and sustained economic vitality, but such circumstances may be experienced unevenly residents. For some community members, the revitalization project may result in lack of affordability and, in some cases, displacement (Anthony, 2018). While gentrification is typically thought of as a phenomenon confined to urban areas, it also occurs in rural areas—especially those that become able to market themselves as *destinations*—as housing costs escalate beyond what local wages can afford (Golding, 2016).

[6]To conserve space, only the most relevant variables are displayed in Table 1. A full summary table is available in Appendix C. Appendix G contains a Pearson correlation matrix, showing how the main variables in the model correlate with one another.

Table 1: Summary statistics (key variables only)

Statistic	Mean	Std. Dev.	Min	Max
Property Characteristics				
Proximity (miles) to Downtown	1.44	0.97	0.01	5
Property Located Downtown?	0.06	0.25	0	1
Square Footage	1,607.72	632.66	500	9,548
Home Age	52.81	36.03	0	219
Total Rooms	6.3	1.58	1	20
Sale Price (Thousands of Real USD)	$143.3K	$116.2K	$1.1K	$4,999K
Neighborhood Characteristics				
MSP Adopted?	0.13	0.34	0	1
Neighborhood Median Age	39.4	6.3	19.6	76.5
Neighborhood Pct. Non-White	6.7%	7.8%	0%	84.3%
Neighborhood Pct. w/Bachelor's or Higher	19.9%	13.5%	0%	90.1%
Neighborhood Unemployment Rate	6.9%	5.9%	0%	83.8%
N	207,957			

of the MSP was accredited, collected from the state MSP director.[7] This variable was used to create dummy variables indicating whether the municipality had adopted the MSP at the time of the sale.

3.1 The Study Universe

Failing to account for the presence of a traditional downtown district would seriously distort any analysis of the economic impact of downtown revitalization efforts, as only a select group of municipalities within a given state are suitable for comparison. While some communities were settled prior to the automobile era and possess a traditional downtown district, other places only became substantially populated in the last half-century, previously home to mostly undeveloped land. I used the following guidelines to create a study universe, containing only municipalities in Ohio that:

- *Were located in a non-metropolitan county or were more than 15 miles away from a MSA's principal city.* This rule filters out those municipalities that are too close to the orbit of large urban housing markets where the decidedly small-scale MSP would be unlikely to make any significant impacts.

[7]The nominal "adoption" of the MSP is a designation that programs can be accredited with once their MSP-related efforts are in full swing. All analyses use the *accreditation year* as a proxy for overall program adoption, as it would be impossible to consistently identify the moment when each community initiated their revitalization efforts. Among MSP-participating communities, there is a tier of membership for those "affiliate" communities which have begun to engage in the MSP but are not yet accredited. Unfortunately, Ohio's state-level MSP coordinating body (Heritage Ohio) does not have chronological data detailing the tiered membership status of participating communities. Rather, they were only able to provide me with the year in which each accredited community achieved that distinction. To account for this heterogeneity, I treated unaccredited "affiliates" as not having adopted the program yet.

- *Had a 2019 population of between 750 and 60,000.* There are already very few non-metropolitan municipalities in Ohio with 60,000+ residents. However, the state is home to several municipalities with fewer than 750 residents, which are too small for appropriate comparison with observations in larger communities.
- *Had a 1920, 1930, or 1940 population of at least 1,000.* This heuristic roughly establishes whether a given municipality contains a pre-automobile-era downtown district.

Following these guidelines reduces the 1,200+ Ohio municipalities down to a total of 207. Transactions from the First American assessor records database were only kept if the corresponding property was located within five miles of a community in the study universe.

3.2 Geographically Generated Variables

Because no existing dataset fully demarcates the spatial boundaries of the downtown district for each community in the study universe, I manually coded the spatial boundaries of all 207 downtown districts. I used satellite imagery to identify the geographic transition point between the traditional "downtown" and less-dense adjacent land uses.[8] The resulting hand-coded downtowns, while imperfect, provide a practical approximation of the location of each community's historic business district.

For each community in the study universe, the downtown district is represented in the resulting geographic data as both a 'polygon' (a series of points that connect to form the boundary lines that surround the downtown) and the 'centroid' (the geometric center point of downtown). I used geographic information systems (GIS) to generate two key variables from these geographic representations. First, I computed a geographic dummy variable to indicate whether a property was located inside the downtown polygon. It is possible that a location *inside* the downtown district is a "disamenity" due to traffic congestion, pollution (both noise pollution and automobile exhaust), and a lack of convenient parking. Second, I calculated the distance between each property and the downtown centroid to indicate each property's absolute proximity (in miles) to the locus of downtown retail and entertainment activity.[9] Respectively, these variables (illustrated by Figure 1) allow for the measurement of a premium associated with both proximity to downtown and being located *inside* the downtown district.[10]

[8] See Figures D.1 and D.2 in Appendix D.

[9] For all regressions in this paper, the "downtown proximity" variable is specified as the negative absolute value of the natural logarithm of linear distance (miles from the parcel to the centroid of the downtown district). Reversing the sign (from positive to negative) allows the construct of "downtown distance" to be reframed in terms of proximity. While a positive coefficient for a pure distance variable would denote a higher average sale price for houses further from the town center, a positive coefficient for the downtown *proximity* variable denotes a higher value for properties closer to downtown.

[10] Figure 1 demonstrates the two "downtown proximity" variables used in the analysis. As illustrated in the figure, one property is located inside the downtown district and is closer to the downtown centroid (1,299

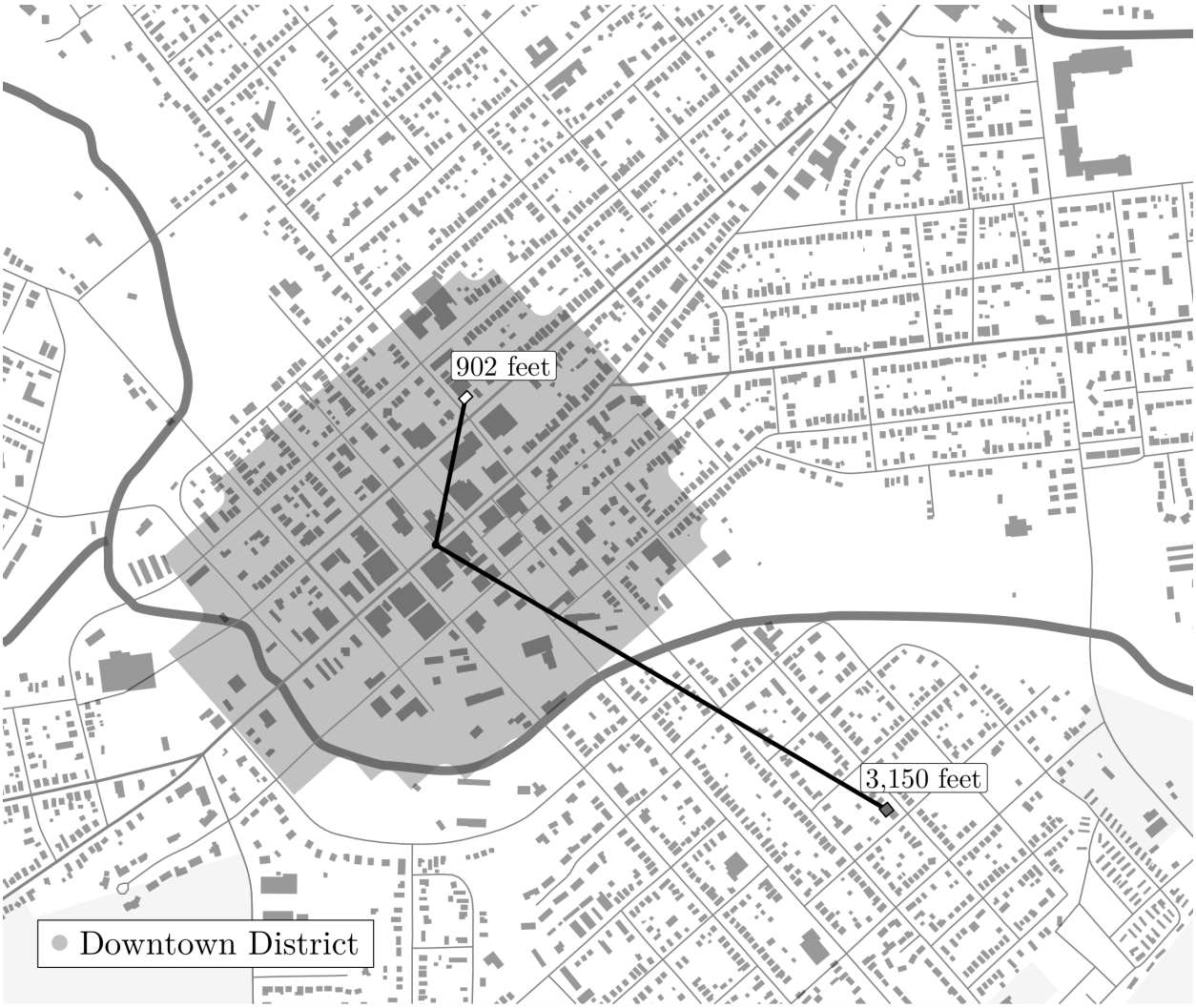

Figure 1: Illustration of downtown proximity variables

4. Empirical Strategy

To examine the influence of the MSP on nearby property values, I employ a hedonic price model which captures relative consumer demand for both 1) the presence of an active Main Street Program in the community and 2) the proximity of the property to the downtown district. I use the following equation:

$$Y_{itc} = f(\beta_1 X_{itc} + \beta_2 N_{itc} + \beta_3 D_{ic} + \beta_4 MSP_{itc} + \delta D * MSP_{itc} + \phi_c + \gamma_t + \epsilon_{itc})$$

where Y_itj is the sale price for property i in year t and community c; X is a vector of property characteristics; N is a vector of neighborhood characteristics; D is the proximity of the property to the center of the downtown district; MSP is a dummy which indicates whether a house was located in a community that was a participating member of the MSP in year t; and ϵ_{itj} represents a stochastic error term. Additionally, ϕ_c are regional fixed effects (corresponding to the Ohio economic development region that a particular county is located in), and γ_t are calendar-year fixed effects.[11] In the results below, I report standard errors clustered by county, and my parameter of interest, δ, is an interaction between downtown proximity and MSP status. It estimates the association between a home's sale price and its proximity to a downtown with an actively participating MSP.[12]

Even when limiting observations to property transactions that took place in the relatively specific context of small Ohio towns, there is still a wide degree of heterogeneity among the properties sold within the 207 communities of the study universe. Accordingly, I filtered out extreme outliers by placing upper and lower limits on the type of properties observed in the analysis.[13] I also used the natural logarithm form of several continuous variables—lot size, square footage, proximity to downtown, and sale price—to account for their skewed distributions. Finally, to make transactions comparable over time I used a consumer price index (FRED, 2020) to transform all transaction prices into *real* 2019 dollars.

In addition to the "base" price model (Table 2 below), I performed two additional variants to gauge the robustness of the main findings. First, I modified the MSP status variable to account for different time lags between a given property's transaction date and the year in which its community's MSP was accredited (hereafter referred to as *MSP adoption*). The base model uses a lag period of

feet apart), while the other property is located outside of the downtown district and is further away (5,209 feet apart) from the downtown centroid.

[11] Fixed effect estimates are omitted in the main tables but are available in Appendix H.

[12] A polynomial functional form of proximity may potentially account for the presence of nuisance effects (i.e., traffic and/or noise) that homebuyers may experience in a property that is within a certain threshold of proximity to downtown. However, upon testing a variety of alternate functional forms—such as the log of proximity-squared and the log of proximity-cubed—the estimated coefficients of the key explanatory variables change very little, if at all.

[13] I used upper or lower bounds on sale price, lot size, number of bathrooms and bedrooms, and square footage. These constraints reduce the size of the dataset by approximately 8%.

two years, which is a rationally expected delay for the program's effect to be fully internalized by homebuyers. To test the sensitivity of this relationship, I generated a series of additional dummies corresponding with different combinations of years before the sale (see Table 3). As an additional robustness check, I also code the MSP adoption variable as a "lead" (rather than lag) term.[14] For variables in Table 3, reading the table from left to right gives an indication as to the temporal dynamics of program adoption: columns toward the left use an MSP adoption variable coded to reflect a not-yet-adopted (Columns 1 and 2) or newly-adopted (Columns 3 and 4) program, while columns toward the right use an MSP adoption variable that is coded to reflect a more "mature" implementation of the program (Columns 4-7).

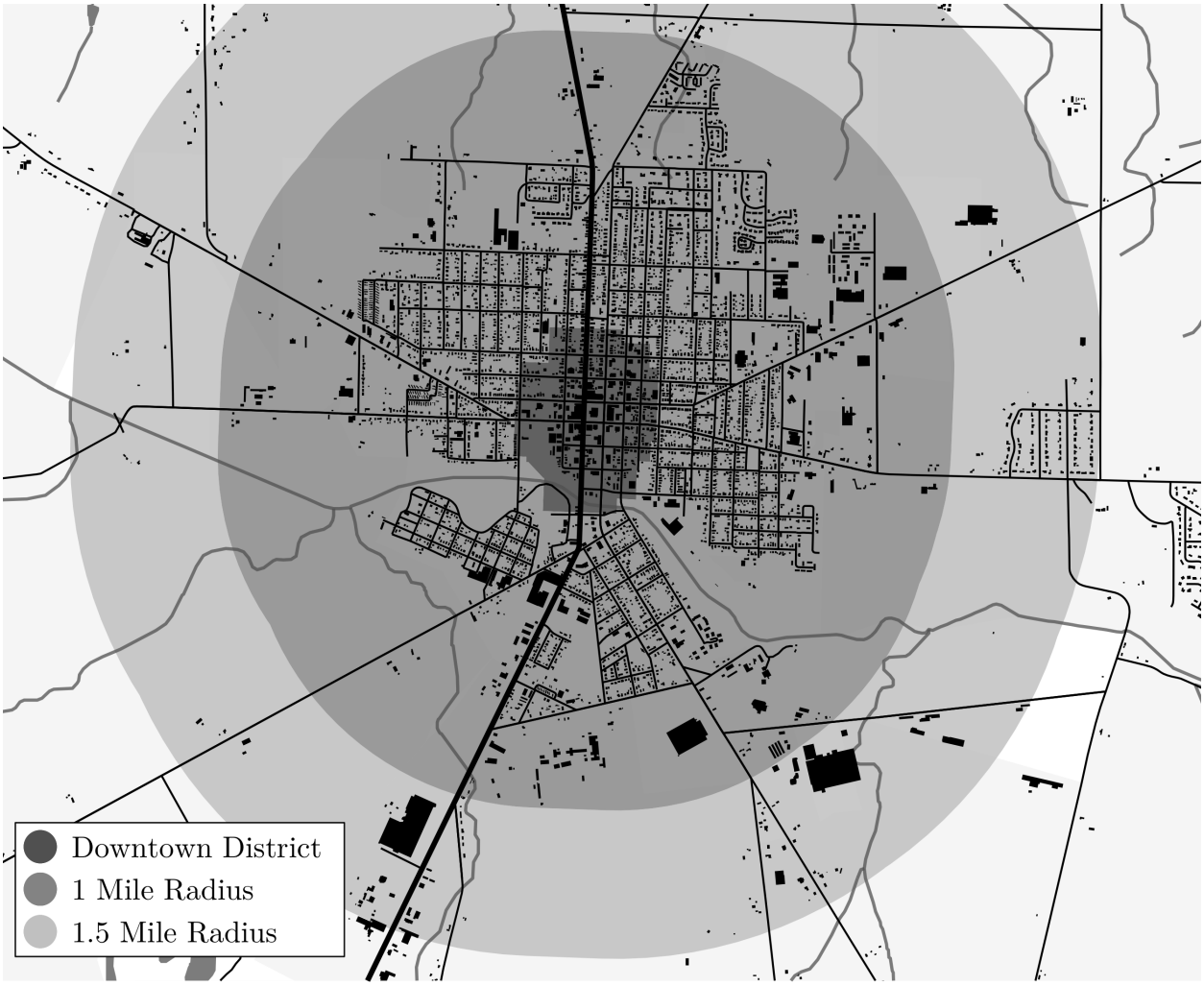

Figure 2: Example of distance buffers surrounding downtown district

[14]This is analogous to a placebo test in quasi-experimental designs, which measures whether the main effect still appears significant, even when the "treatment"—in this case, MSP adoption—has not yet occurred.

In the base model and the time-lag variant (Tables 2 and 3 respectively), the observed transactions include all properties within five miles of municipal limits. However, in the second variant of the base model I place even narrower restrictions (as illustrated in Figure 2) to include only those properties within a 1 or 1½-mile radius from the downtown district.[15] As noted above, prospective homebuyers searching in "sprawl" neighborhoods are not as likely to value downtown as an amenity. By omitting properties that are unequivocally located in car-dependent locales—a mile or more away from downtown—estimates from the geographically restricted variant of the base model are not biased by the preferences of individuals whose homebuying decisions are practically uninfluenced by the emergence of downtown as a vibrant amenity district.

5. Results

Regarding a property's overall spatial relationship to downtown, the Table 2 indicates that, on average, a one percent increase in proximity to downtown was associated with a three percent lower sale price.[16] However, when considering the *interaction* of both downtown proximity and MSP adoption together, the relationship is inverted: for houses that sold in a community with an active MSP, a one percent increase in proximity to downtown was associated with a five percent *higher* sale price. These results, while modest, suggest that the MSP is a promising vehicle for transforming downtown into an amenity desired by homebuyers. However, the hedonic estimates do not comprise a *causal* relationship; the direction of causality likely flows in both directions, as communities with a healthier local economy (and housing market) may be more likely to adopt the MSP.

Table 2: Base hedonic price model

	(1)
Located Inside Downtown?	0.01
	(0.02)
Downtown Proximity	-0.03**
	(0.02)
MSP Adopted?	0.12
	(0.08)
Proximity*MSP interaction	0.05*
	(0.03)
Observations	207,957
R^2	0.426

* p<0.10, ** p<0.05, *** p<0.01

[15] Figure 2 illustrates the use of geography to reduce the number of observations. Centered around the downtown business district polygon, a pair of GIS buffers were generated at both 1- and 1½-mile increments.

[16] To conserve space, only the key independent variables are displayed in Table 2. A full version of the table is available in Appendix E.

Table 3: Key variable estimates, by relative time of adoption

	MSP Accredited At Least ___ Years Relative to Transaction						
	2 Years After	1 Year After	Year of Sale	1 Year Prior	2 Years Prior	3 Years Prior	5 Years Prior
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Located Inside Downtown?	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Downtown Proximity	-0.03**	-0.03**	-0.03**	-0.04**	-0.03**	-0.03**	-0.03**
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
MSP Adopted?	0.11	0.11	0.12	0.13	0.12	0.11	0.13
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.10)
Proximity*MSP interaction	0.04	0.04	0.04	0.05**	0.05*	0.05*	0.06*
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Observations	207,957	207,957	207,957	207,957	207,957	207,957	207,957
R^2	0.426	0.426	0.426	0.426	0.426	0.426	0.426

* p<0.10, ** p<0.05, *** p<0.01

The base model results indicate a negative relationship between downtown proximity and sale price which is *offset* in communities with an active MSP that had been implemented at least two years prior to the transaction. Table 3 reports how the model estimates vary when the MSP adoption variable is coded using different lag periods.

The downtown proximity variable remains relatively steady for all variations of the lag and lead periods for MSP adoption, suggesting a robust negative relationship between home sale prices and downtown proximity in non-metropolitan communities across Ohio. Like that of the base model, all *Downtown Proximity* coefficients in Table 3 indicate that houses sold closer to downtown were valued lower than those further away from the city center. However, the estimated coefficients for the *Proximity*MSP* interaction do not remain steady across the models in Table 3. When MSP adoption was coded using an instantaneous MSP adoption term —i.e., the program was accredited in the exact year as the transaction—the interaction term (0.04) was not statistically significant. When coded using a one, two, or three-year lag, the interaction effect was large enough (0.05) to counteract the overall downtown proximity effect, netting between a 1% or 2% "downtown proximity premium" when combined with the overall *Downtown Proximity* effect. Finally, when program adoption was coded using a *five*-year lag, the interaction was even larger (0.06), resulting in a net proximity premium of around 3 percent. Although they do not identify a causal relationship, these suggest a robust association between MSP adoption and a reversal of the downtown proximity-price gradient in subsequent years.[17]

[17]See Appendix F for a more detailed examination of this sensitivity analysis.

Table 4: Key variable estimates, by downtown proximity

	Properties within _____ Radius from Downtown		
	Entire Municipality	Within 1.5 Miles	Within a Mile
	(1)	(2)	(3)
Located Inside Downtown?	0.01	0.01	0.02
	(0.02)	(0.01)	(0.02)
Downtown Proximity	-0.03**	-0.03*	-0.04
	(0.02)	(0.02)	(0.02)
MSP Adopted?	0.12	0.17*	0.18*
	(0.08)	(0.10)	(0.09)
Proximity*MSP interaction	0.05*	0.08*	0.09**
	(0.03)	(0.04)	(0.04)
Observations	207,957	125,309	86,152
R^2	0.426	0.383	0.350

* p<0.10, ** p<0.05, *** p<0.01

Table 4 presents a second variation on the base hedonic price model which adjusts for observations' downtown proximity. The regressions in Table 4 use a tighter radius around downtown to omit properties from the analysis which are less likely to appeal to homebuyers with stronger preferences for walkability. Column 1 of Table 4 repeats the results of the base model, which include all properties located within a five-mile radius of the communities in the study universe.[18] However, in Models 2 and 3, the original 207,957 observations shrink down to a total of 125,309 (within a $1\frac{1}{2}$-mile radius) and further down to 86,152 (within a 1-mile radius). In Model 2, the overall downtown proximity effect remains constant while the interaction between MSP adoption and downtown proximity increases by three percentage points. In Model 3, the overall downtown proximity effect ceases to be statistically significant, and the *Proximity*MSP* interaction increases by an additional percentage point. Taken together, these results suggest an even stronger influence of a *newly revitalized* downtown district as a potential real estate amenity for homebuyers looking at parcels located closer to the town center.

6. Discussion & Conclusion

This study consists of a series of hedonic price models that examine the relationship between a given residential property's proximity to downtown and its sale price. By also measuring the *interaction* between downtown proximity and the presence of an active Main Street Program, the analysis serves as a modest evaluation of the MSP as a place-making effort. As such, this study contributes

[18]The "base model" (Table 2) is identically specified in Column 3 of Table 3 and Column 1 of Table 4.

a number of insights for planners, economic development practitioners, and scholars concerned with downtown revitalization.

6.1 Zooming Out: Contextualizing Findings Geographically

While my analysis suggests that the MSP is a promising vehicle for downtown revitalization, its findings should be framed within a wider economic and geographic context. Unlike many economic revitalization programs and policies, whose effects are often assumed to be dispersed throughout an entire city or region, the MSP is relatively quite small in scale, with a community and economic development footprint that is *local* rather than regional. Thus, as a small-scale placemaking approach implemented in often large geographic regions,[19] the MSP is unlikely to generate an *absolute* increase in regional housing demand. Rather, by coordinating stakeholders' efforts to transform downtown retail districts into more attractive and vibrant places, the MSP helps to elevate the *relative* position of the downtown housing submarket within the larger regional market.

This may seem like a trivial distinction, but its ramifications are significant for planners in declining rural communities. Walkable historic business districts are among the few assets possessed by smaller, older communities attempting to hold back a nearly ubiquitous landscape of sprawl and "placeless" geography (Kunstler, 1994). In order to preserve downtown as the anchor and epicenter of an integrated civic and commercial fabric, communities need to identify downtown revitalization approaches that are not only effective but are also scalable and sustainable. In this regard, the Main Street Program is a promising strategy because of its small footprint; resources are not focused indiscriminately on an entire municipality or region, but rather, they are specifically directed toward elevating the relative position of downtown within the larger regional market.[20] Vibrant downtown retail districts provide a physical space in which social capital is created and reinforced (Jacobs, 1961; Talen and Jeong, 2019). Higher levels of social capital (and the resulting improvement to public safety) then become an established attribute of the downtown submarket and distinguish the town as a thriving community, trending upward within the larger region. Therefore, even if small in magnitude, the second- and third-order effects of revitalizing the downtown district can be much stronger than if resources and energy were expended toward redeveloping a more peripheral, car-oriented neighborhood.

---

[19] Owing to labor market looseness and a higher tolerance for long commutes (Swenson and Otto, 1997; Aldrich et al., 1997), non-metropolitan housing market areas are expansive, with downtown-adjacent neighborhoods in small towns comprising only a comparatively small submarket within the larger regional market (Rothenberg et al., 1991).

[20] It is possible that a vibrant, active Main Street Program in one municipality may generate some degree of spillover, positive or negative, for properties in other housing submarkets throughout the region, including those without an active MSP. Future extensions of this research may use a different empirical approach (and different geographic units of analysis) to estimate the larger effects of MSP adoption on property transactions throughout the region.

6.2 "Small Town" Revitalization in Urban Contexts

The MSP's focus on revitalizing a relatively small business district may also prove to be effective in a metropolitan context as well. While tiny in comparison to the billions spent on major infrastructure and urban development projects (e.g., the Washington D.C. Navy Yard), the Main Street Program is incredibly efficient at leveraging investment to elevate the relative position of a retail corridor or district within the greater region. Because of the symbolic prominence of the walkable "small town" in the American cultural psyche (Orvell, 2012), it is often emulated in contemporary urban retail development (e.g., outdoor malls, transit-oriented development, and new urbanism). Indeed, versions of the Main Street Program have recently been implemented in metropolitan settings—in such cities as Tulsa, OK or Buffalo, NY—bringing the same tools and techniques of the MSP to historic commercial districts in urban areas.

While stakeholders in metropolitan commercial districts often face different challenges from those in rural towns, the findings of this study illustrate the importance of *placemaking* as a viable economic revitalization strategy. Small-scale investments toward building a vibrant locality for economic, social, and civic activity may be more scalable than offering large tax incentives (Bartik, 2020) or undertaking debt-financed "megaprojects" (Flyvbjerg, 2014) as an economic development solution. Thus, the gains from cultivating a vibrant business district, even when modest, may still be an attractive option for fiscally constrained cities or neighborhoods without access to financing for larger projects. Although this paper did not focus on commercial district revitalization in a metropolitan context, it is likely that larger cities may still benefit from using the MSP's small-scale placemaking approach.

6.3 Evidence-Based Knowledge in Planning

On a broad level, this paper reflects—and attempts to address—the obstacles researchers face in assembling evidence-based knowledge for planners. Below, I discuss two key ways in which this study illustrates the difficulties of evaluating planning policies and programs, especially those intended to revitalize a places or regions in decline.

First, this study was both enabled and limited by the quality and availability of housing transaction data. I was able to use property assessment and transaction data from First American DataTree (2020) free of cost for this analysis; such opportunities are not always possible for researchers, and the lack of good data can altogether halt any efforts to quantitatively evaluate a policy or program. However, even with the data available to me, my study was limited in terms of its explanatory capabilities: the cross-sectional format of the property transaction dataset displays the most recent sale price and date for every single-family home but does not show how a particular property's value has changed over time. This precludes the possibility of a panel regression design—such as difference-in-differences analysis—that would precisely identify the causal impact of MSP on housing market outcomes.

The takeaway for planners is not to delay evaluation until the perfect dataset becomes available, but rather, make do with what is available. Discussing the impossibility of observing the unobservable, Baum (2001) counseled planning researchers to "aim for what matters and focus on what is accessible," even if ambiguity impedes the search for a wholly definitive answer. Establishing causality is a highly desired outcome for policy and program evaluation but is often challenging for planning researchers due to the litany of "nonplanning factors" that influence the ultimate outcome (Seasons, 2003). While my data did not allow for a quasi-experimental research design—regarded by many researchers as the "gold standard" of causal policy analysis—my analysis nonetheless contributes evidence-based knowledge to planners and policymakers, serving as a foundation for *future* research examining the relationship between downtown revitalization efforts and local housing market vitality.

Second, evaluating the "success" of a program hinges entirely on the outcome variables chosen by the researcher. In the wider literature regarding the efficacy of geographically targeted economic development interventions (Neumark and Simpson, 2015), success is often measured in terms of new jobs and firms, higher wages, and over fiscal (tax) impacts. The MSP itself has been quantitatively evaluated in terms of retail sales performance (Bradbury, 2011) and downtown retail job and establishment formation (Van Leuven, 2021). To my knowledge, this paper is the first to use hedonic price modeling to explore the influence of downtown revitalization efforts on local housing market outcomes.

However, downtown revitalization efforts can, and should, be evaluated using an extensive variety of measures. Depending on the goals that a particular community shared when initially embarking on the MSP (or similar programs), their cumulative efforts may be judged by metrics that differ widely from those used in this study. The idea of "success" may be measured differently according to the various stakeholders involved in a program (Talen, 1996; Alexander and Faludi, 1989). For the MSP, "success" may take the form of new customers attracted, vacant storefronts rehabilitated, federal grant dollars secured, or simply an improvement in residents' *perceptions* regarding the vibrancy and attractiveness of downtown.[21] Using a variety of variables to capture economic vitality also enables true "goal achievement evaluation" (Alterman et al., 1984) which consists of accounting for the aims of *all* "parties who are interested in...or are affected by" the program. While policymakers

[21] While valid and salient measures of economic vitality, the alternative metrics of success listed above present a variety of challenge regarding data collection and analysis. Objectively collected quantitative data points—such as home sale prices or job counts—avoid the pitfalls of inconsistency and measurement bias and are thus more common in empirical analyses of economic revitalization policies and programs. However, other metrics are common for internal use within the administrative operation of the Main Street Program. For example, community MSP directors are often required to report the cumulative dollar value of investments (both pending and completed) in building rehabilitation and business development. Such metrics, while challenging to compile and evaluate in a wide-scale research analysis, are invaluable at a local level for giving policymakers, volunteers, and donors a sense of the smaller, more immediate successes that arise as a result of their downtown revitalization efforts.

and researchers often focus on tangible, readily measurable outcomes such as jobs creation, community members need planners to evaluate programs using a broader range of outcomes. This, in turn, allows for a more complete triangulation of how the MSP and other downtown revitalization strategies shape the local economy.

The obstacles associated with evaluating planning interventions are hardly new. In one of the earliest issues of the *Journal of Planning Education and Research*, Madsen (1983) pleaded with planners to not lose sight of their comparative advantage within social science research. Madsen reminded planners that there is no substitute for equipping decisionmakers with pragmatic, knowledge, rich with local context and actionable implications. She concedes that rigorous experimental evaluations have their place, but that they are only appropriate "after descriptive and initial quantitative comparisons of program context and success have suggested the types of variables and the theory most relevant to the policy problem." Providing policymakers with evidence-based knowledge requires planning researchers to decide between sophistication and expediency. Analytical rigor and discipline, however, should never be sacrificed.

The complexities of evaluation are accentuated even further when focusing on places and regions experiencing economic decline. Whether rational or not, people are often "attached to places" (Bartik, 2020), regardless of said places' economic prosperity (or lack thereof). The two evaluative hurdles described above—working with limited data and defining "success" in relative terms—are even more challenging to overcome when a program is implemented in an economically distressed region. Programs like the MSP are adopted among a wide variety of economic contexts, such that a thriving college town and a declining former factory town may both be "peer" communities in the program. However, while the former may have the goal of new jobs and higher property values, the latter may simply want to stop the bleeding.

The Main Street Program embodies many of the challenges researchers face in gathering evidence-based knowledge for planners. It is a modest place-making program whose success is driven not by tax incentives and large cash transfers, but rather by community leaders, planners, and volunteers. It is implemented in smaller, mostly rural communities who lack the administrative capacity for robust data collection. Its participants enter the program from vastly different starting points and disparate ambitions. Nevertheless, the MSP is a promising option for small-town economic revitalization; despite the challenges discussed above, this paper contributes plausible evidence that the MSP exerts a positive influence on small-town housing market outcomes, refocusing demand and value toward the amenity of downtown.

6.4 Conclusion

As the "heart and soul" of American small towns (Robertson, 1999), downtown provides communities with the opportunity to transform their aging civic, commercial, and cultural centers into an attractive destination for visitors and residents alike. In this study, I explored the relationship

between Main Street Program adoption and local economic vitality, measured in terms of property values. My findings indicate that MSP adoption plays a significant role in counteracting the traditional automobile-era pattern of housing desirability.

While the MSP does not necessarily generate *new* demand in small-town housing markets, the downtown revitalization efforts of the program nonetheless help to change the relative position of the downtown-adjacent neighborhoods within the greater regional housing market. For planners and policymakers in smaller non-metropolitan communities, the MSP presents an opportunity to help keep their town on the map by transforming downtown into a vibrant place—as a differentiated consumption environment, a historic preservation landmark, and a walkable alternative to automobile-oriented development—where residents want to dine, shop, spend their time, and most importantly, live close by.

References

Abbott, C. (1993). Five downtown strategies: Policy discourse and downtown planning since 1945. *Journal of Policy History*, 5(1):5–27.

Ahlfeldt, G. M. and Maennig, W. (2010). Substitutability and complementarity of urban amenities: External effects of built heritage in Berlin. *Real Estate Economics*, 38(2):285–323.

Aldrich, L., Beale, C., and Kassel, K. (1997). Commuting and the economic functions of small towns and places. *Rural America/Rural Development Perspectives*, 12(2221-2019-2641):26–31.

Alexander, E. R. and Faludi, A. (1989). Planning and plan implementation: notes on evaluation criteria. *Environment and planning B: Planning and Design*, 16(2):127–140. Publisher: SAGE Publications Sage UK: London, England.

Alterman, R., Carmon, N., and Hill, M. (1984). Integrated evaluation: A synthesis of approaches to the evaluation of broad-aim social programs. *Socio-Economic Planning Sciences*, 18(6):381–389. Publisher: Elsevier.

Angel, S. (2012). *Planet of cities*. Lincoln Institute of Land Policy Cambridge, MA.

Anthony, J. (2018). Economic prosperity and housing affordability in the United States: lessons from the booming 1990s. *Housing Policy Debate*, 28(3):325–341. Publisher: Taylor & Francis.

Asabere, P. K., Huffman, F. E., and Mehdian, S. (1994). The adverse impacts of local historic designation: the case of small apartment buildings in Philadelphia. *The Journal of Real Estate Finance and Economics*, 8(3):225–234.

Aydin, R., Crawford, E., and Smith, B. A. (2011). Commercial Development Spillover Effects Upon Residential Values. *Southwestern Economic Review*, 37:47–62.

Bartik, T. J. (2020). Using place-based jobs policies to help distressed communities. *Journal of Economic Perspectives*, 34(3):99–127.

Baum, H. S. (2001). How should we evaluate community initiatives? *Journal of the American Planning Association*, 67(2):147–158. Publisher: Taylor & Francis.

Been, V., Ellen, I. G., Gedal, M., Glaeser, E. L., and McCabe, B. J. (2016). Preserving history or restricting development? The heterogeneous effects of historic districts on local housing markets in New York City. *Journal of Urban Economics*, 92:16–30.

Bolton, R. (1992). 'Place prosperity vs people prosperity' revisited: An old issue with a new angle. *Urban Studies*, 29(2):185–203.

Bradbury, K. L., Downs, A., and Small, K. A. (1982). *Urban decline and the future of American cities*. The Brookings Institution, Washington DC.

Bradbury, S. L. (2011). An Evaluation of Iowa's Rural Main Street Program. *Journal of Rural and Community Development*, 6(2).

Brueckner, J. K. (2000). Urban sprawl: diagnosis and remedies. *International regional science review*, 23(2):160–171.

Brueckner, J. K., Thisse, J.-F., and Zenou, Y. (1999). Why is central Paris rich and downtown Detroit poor?: An amenity-based theory. *European economic review*, 43(1):91–107. Publisher: Elsevier.

Clark, D. E. and Herrin, W. E. (1997). Historical preservation districts and home sale prices: evidence from the Sacramento housing market. *Review of regional studies*.

Coulson, N. E. and Lahr, M. L. (2005). Gracing the Land of Elvis and Beale Street: Historic Designation and Property Values in Memphis. *Real Estate Economics*, 33(3):487–507.

Downs, A. (1999). Some Realities about Sprawl and Urban Decline. *Housing Policy Debate*, 10(4):955–974.

Duany, A., Plater-Zyberk, E., and Speck, J. (2001). *Suburban nation: The rise of sprawl and the decline of the American dream*. Macmillan.

Faulk, D. (2006). The process and practice of downtown revitalization. *Review of Policy Research*, 23(2):625–645.

Filion, P., Hoernig, H., Bunting, T., and Sands, G. (2004). The successful few: Healthy downtowns of small metropolitan regions. *Journal of the American Planning Association*, 70(3):328–343.

First American DataTree (2020). *Assessor Records Database*.

Flyvbjerg, B. (2014). What you should know about megaprojects and why: An overview. *Project management journal*, 45(2):6–19. Publisher: SAGE Publications Sage CA: Los Angeles, CA.

Ford, D. A. (1989). The effect of historic district designation on single-family home prices. *Real Estate Economics*, 17(3):353–362.

Frank, K. I. and Hibbard, M. (2017). Rural planning in the twenty-first century: Context-appropriate practices in a connected world. *Journal of Planning Education and Research*, 37(3):299–308. Publisher: SAGE Publications Sage CA: Los Angeles, CA.

Frank, L. D., Mayaud, J., Hong, A., Fisher, P., and Kershaw, S. (2019). Unmet demand for walkable transit-oriented neighborhoods in a midsized Canadian community: market and planning implications. *Journal of Planning Education and Research*, page 0739456X19831064. Publisher: SAGE Publications Sage CA: Los Angeles, CA.

FRED (2020). Consumer price index for all urban consumers: all items.

Galster, G., Hanson, R., Ratcliffe, M. R., Wolman, H., Coleman, S., and Freihage, J. (2001). Wrestling sprawl to the ground: defining and measuring an elusive concept. *Housing policy debate*, 12(4):681–717.

Glaeser, E. L. and Gottlieb, J. D. (2006). Urban resurgence and the consumer city. *Urban studies*, 43(8):1275–1299.

Golding, S. A. (2016). Gentrification and segregated wealth in rural America: Home value sorting in destination counties. *Population Research and Policy Review*, 35(1):127–146. Publisher: Springer.

Hamidi, S., Ewing, R., Preuss, I., and Dodds, A. (2015). Measuring sprawl and its impacts: An update. *Journal of Planning Education and Research*, 35(1):35–50. Publisher: SAGE Publications Sage CA: Los Angeles, CA.

Hibbard, M. and Lurie, S. (2019). If Your Rural Community Is Failing, Just Leave? The Revival of Place Prosperity in Rural Development Planning. *Journal of Planning Education and Research*, page 0739456X19895319. Publisher: SAGE Publications Sage CA: Los Angeles, CA.

Hohenberg, P. M. and Lees, L. H. (1995). *The Making of Urban Europe, 1000–1994: With a New Preface and a New Chapter*. Harvard University Press.

Howie, P., Murphy, S. M., and Wicks, J. (2010). An application of a stated preference method to value urban amenities. *Urban Studies*, 47(2):235–256.

Huh, S. and Kwak, S.-J. (1997). The choice of functional form and variables in the hedonic price model in Seoul. *Urban Studies*, 34(7):989–998. Publisher: Sage Publications Sage UK: London, England.

Jacobs, J. (1961). *The Death and Life of Great American Cities*. Vintage.

Jamme, H.-T. W., Bahl, D., and Banerjee, T. (2018). Between "broken windows" and the "eyes on the street:" Walking to school in inner city San Diego. *Journal of Environmental Psychology*, 55:121–138. Publisher: Elsevier.

Kelly-Schwartz, A. C., Stockard, J., Doyle, S., and Schlossberg, M. (2004). Is sprawl unhealthy? A multilevel analysis of the relationship of metropolitan sprawl to the health of individuals. *Journal of Planning Education and Research*, 24(2):184–196. Publisher: Sage Publications Sage CA: Thousand Oaks, CA.

Ki, C. O. and Jayantha, W. M. (2010). The effects of urban redevelopment on neighbourhood housing prices. *International Journal of Urban Sciences*, 14(3):276–294. Publisher: Taylor & Francis.

Kolko, J. (2020). The Myth of the Urban Boomer. *The New York Times*.

Kunstler, J. H. (1994). *The Geography of Nowhere: The Rise And Decline of America's Man-Made Landscape*. Simon and Schuster.

Leichenko, R. M., Coulson, N. E., and Listokin, D. (2001). Historic preservation and residential property values: an analysis of Texas cities. *Urban Studies*, 38(11):1973–1987.

Li, W., Joh, K., Lee, C., Kim, J.-H., Park, H., and Woo, A. (2015). Assessing benefits of neighborhood walkability to single-family property values: A spatial hedonic study in Austin, Texas. *Journal of Planning Education and Research*, 35(4):471–488.

Listokin, D., Listokin, B., and Lahr, M. (1998). The Contributions of Historic Preservation to Housing and Economic Development. *Housing Policy Debate*, 9(3):431.

Madsen, R. (1983). Use of evaluation research methods in planning and policy contexts. *Journal of Planning Education and Research*, 2(2):113–121. Publisher: Sage Publications Sage CA: Thousand Oaks, CA.

McCabe, B. J. and Ellen, I. G. (2016). Does preservation accelerate neighborhood change? Examining the impact of historic preservation in New York City. *Journal of the American Planning Association*, 82(2):134–146. Publisher: Taylor & Francis.

Miller, N., Peng, L., and Sklarz, M. (2011). House prices and economic growth. *The Journal of Real Estate Finance and Economics*, 42(4):522–541. Publisher: Springer.

Myers, D. and Gearin, E. (2001). Current Preferences and Future Demand for Denser Residential Environments. *Housing Policy Debate*, 12(4):633.

Neumark, D. and Simpson, H. (2015). Place-based policies. In *Handbook of regional and urban economics*, volume 5, pages 1197–1287. Elsevier.

Noonan, D. S. (2007). Finding an impact of preservation policies: price effects of historic landmarks on attached homes in Chicago, 1990-1999. *Economic development quarterly*, 21(1):17–33.

Oldenburg, R. and Brissett, D. (1982). The third place. *Qualitative Sociology*, 5(4):265–284.

Orvell, M. (2012). *The death and life of Main Street: small towns in American memory, space, and community*. UNC Press Books.

Pivo, G. and Fisher, J. D. (2011). The walkability premium in commercial real estate investments. *Real Estate Economics*, 39(2):185–219.

Rauterkus, S. Y. and Miller, N. (2011). Residential land values and walkability. *Journal of Sustainable Real Estate*, 3(1):23–43.

Robertson, K. A. (1993). Pedestrianization strategies for downtown planners: Skywalks versus pedestrian malls. *Journal of the American Planning Association*, 59(3):361–370. Publisher: Taylor & Francis.

Robertson, K. A. (1995). Downtown redevelopment strategies in the United States: An end-of-the-century assessment. *Journal of the American Planning Association*, 61(4):429–437.

Robertson, K. A. (1999). Can small-city downtowns remain viable? A national study of development issues and strategies. *Journal of the American Planning Association*, 65(3):270–283.

Robertson, K. A. (2004). The main street approach to downtown development: An examination of the four-point program. *Journal of Architectural and Planning Research Journal of Architectural and Planning Research*, 21(21):55–731.

Rothenberg, J., Galster, G. C., Butler, R. V., and Pitkin, J. R. (1991). *The maze of urban housing markets: Theory, evidence, and policy*. University of Chicago Press.

Ryberg-Webster, S. and Kinahan, K. L. (2014). Historic preservation and urban revitalization in the twenty-first century. *Journal of Planning Literature*, 29(2):119–139.

Rypkema, D. D. (2003). The importance of downtown in the 21st century. *Journal of the American Planning Association*, 69(1):9–15.

Rącka, I., Palicki, S., Krajewska, M., Szopińska, K., and Kempa, O. (2017). Changes On the Housing Market of the Downtown Area in Selected Polish Cities. *Real Estate Management and Valuation*, 25(2):79–90.

Schaeffer, P. V. and Millerick, C. A. (1991). The impact of historic district designation on property values: An empirical study. *Economic Development Quarterly*, 5(4):301–312.

Seasons, M. (2003). Indicators and core area planning: applications in canada's mid-sized cities. *Planning Practice & Research*, 18(1):63–80.

Sohmer, R. R. and Lang, R. E. (2001). Downtown rebound. *Redefining urban and suburban America: Evidence from census 2000*, 1:63–74.

Song, Y. and Knaap, G.-J. (2004). Measuring the effects of mixed land uses on housing values. *Regional Science and Urban Economics*, 34(6):663–680.

Speck, J. (2013). *Walkable city: How downtown can save America, one step at a time*. Macmillan.

Swenson, D. and Otto, D. M. (1997). Rural housing market response to nonfarm employment growth: an analysis of housing development patterns. *International Journal of Public Administration*, 20(8-9):1579–1598. Publisher: Taylor & Francis.

Talen, E. (1996). Do plans get implemented? A review of evaluation in planning. *Journal of planning literature*, 10(3):248–259. Publisher: Sage Publications Sage CA: Thousand Oaks, CA.

Talen, E. and Jeong, H. (2019). What is the value of 'main street'? Framing and testing the arguments. *Cities*, 92:208–218.

Van Leuven, A. J. (2021). The Impact of Main Street Revitalization on the Economic Vitality of Small-Town Business Districts. *Economic Development Quarterly*. Publisher: SAGE Publications Sage CA: Los Angeles, CA.

Yin, L., Zhang, H., Patterson, K., Silverman, R., and Wu, L. (2020). Walkability, safety, and housing values in shrinking cities: Spatial hedonic study in Buffalo, Pittsburgh, and Detroit. *Journal of Urban Planning and Development*, 146(3):04020029. Publisher: American Society of Civil Engineers.

Appendices

A. Main Street Transformation Strategies

Table A.1: National Main Street Center (NMSC) Transformation Strategies

Strategy	Description
Economic Vitality	Focuses on capital, incentives, and other economic and financial tools to assist new and existing businesses, catalyze property development, and create a supportive environment for entrepreneurs and innovators that drive local economies
Design	Supports a community's transformation by enhancing the physical and visual assets that set the commercial district apart.
Promotion	Positions the downtown or commercial district as the center of the community and hub of economic activity, while creating a positive image that showcases a community's unique characteristics.
Organization	Involves creating a strong foundation for a sustainable revitalization effort, including cultivating partnerships, community involvement, and resources for the district.

Figure A.1: Graphic from NMSC Website: Main Street Transformation Strategies

B. Ohio and U.S. Main Street Program Communities

Figure B.1 displays the communities used in the analysis of this paper. Red (or darker) dots correspond with municipalities with an active (as of 2020) Main Street Program, while the lighter gray dots correspond with municipalities without an active MSP. Communities from the highest populated metropolitan counties—such as Cuyahoga and Franklin Counties, home to Cleveland and Columbus, respectively—were not included in the analysis (refer to the main text of the manuscript for a full explanation of the study universe).

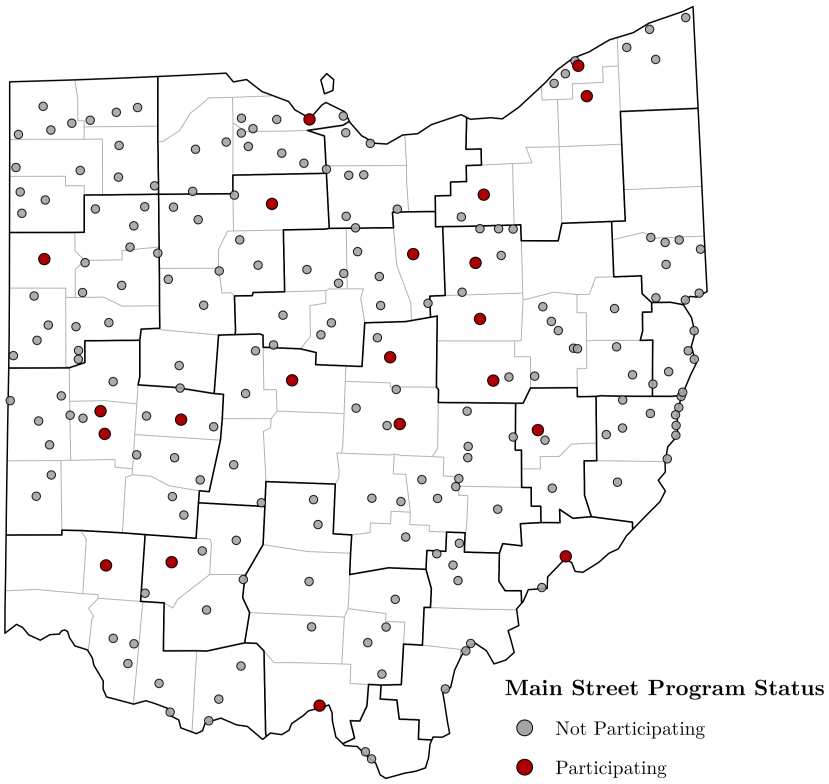

Figure B.1: The Study Universe

Both Table B.1 and Figure B.2 provide a description of the overall landscape of the Main Street Program on a national scale. Table B.1 provides summary statistics of the municipalities with an active Main Street Program (distinguishing between metropolitan and non-metropolitan instances of the program). Figure B.2 displays where MSP-participating communities are located throughout the United States, again distinguishing between metropolitan and non-metropolitan status.

Table B.1: Summary Statistics of Active MSP Counties, by Statistical Area Type

Statistic	Mean	Std. Dev.	Min	Max
MSPs in Metropolitan Areas				
Total Population[1]	281,520	439,853	5,808	5,275,541
Population Density (per square mile)	592.8	1,316.5	8	12,519
Population Change, 2010-20	8.3%	10.6%	-13.5%	53.4%
Percent Non-White	22.1%	15.3%	1.5%	81.1%
Natural Amenity Score	3.7	1	1	7
Zillow Home Value Index	$222,671	$114,442	$58,852	$924,935
MSPs in Micropolitan Areas				
Total Population	47,833	23,811	4,874	143,049
Population Density (per square mile)	73.3	49.4	4	244.2
Population Change, 2010-20	0%	6.1%	-23.8%	25.5%
Percent Non-White	19.5%	16.6%	2.3%	84.8%
Natural Amenity Score	3.6	1	2	7
Zillow Home Value Index	$147,103	$73,062	$30,301	$492,680
MSPs not in a Statistical Area				
Total Population	20,269	11,978	788	59,541
Population Density (per square mile)	36.2	24.9	0.7	117.8
Population Change, 2010-20	-2.5%	6%	-17.6%	18.3%
Percent Non-White	17%	15.9%	1.3%	63.1%
Natural Amenity Score	3.5	1	2	7
Zillow Home Value Index	$132,083	$71,368	$40,055	$515,463

[1] All statistics reported at *county* level for calendar year 2020, unless otherwise noted

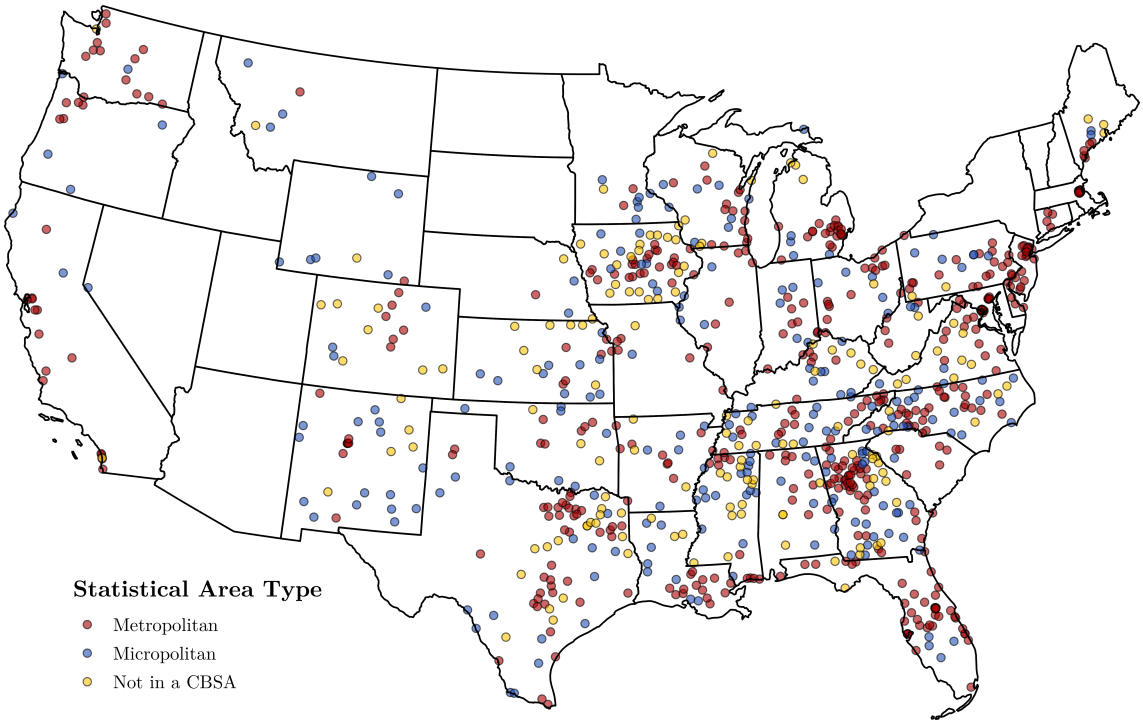

Figure B.2: Accredited Main Street Program Communities, by Statistical Area Type

C. Full Summary Statistics

As the main text contains a truncated summary statistics table, Table C.1 displays summary statistics for all variables in the analysis. Two additional display summary statistics for two subsets of observations in the study: Table C.2 contains summary statistics for homes sold in places with an active MSP, and Table C.3 contains summary statistics for homes sold in places without an active MSP. Together, the tables should allow for a robust comparison of market conditions between properties within each group.

Table C.1: Full summary statistics

Statistic	Mean	Std. Dev.	Min	Max
Main Street Program Characteristics				
MSP Adopted?	0.13	0.34	0	1
Property Characteristics				
Distance (miles) to Downtown	1.44	0.97	0.01	5
Property Located Downtown?	0.06	0.25	0	1
Square Footage	1,607.72	632.66	500	9,548
Lot Size (Acres)	0.49	0.92	0.001	10
Home Age	52.81	36.03	0	219
Bedrooms	3	0.74	1	8
Bathrooms	1.73	0.7	0.5	6
Total Rooms	6.3	1.58	1	20
Number of Stories	1.37	0.47	1	5
Has Deck	0.28	0.45	0	1
Has Garage	0.85	0.36	0	1
Has Pool	0.03	0.18	0	1
Has Basement	0.55	0.50	0	1
Sale Price (Thousands of Real USD)	\$143.3K	\$116.2K	\$1.1K	\$4,999K
Neighborhood Characteristics				
Neighborhood Median Age	39.4	6.3	19.6	76.5
Neighborhood Pct. Non-White	6.7%	7.8%	0%	84.3%
Neighborhood Pct. w/Bachelor's or Higher	19.9%	13.5%	0%	90.1%
Neighborhood Unemployment Rate	6.9%	5.9%	0%	83.8%
N	207,957			

Table C.2: Summary statistics for homes sold in communities with an active MSP

Statistic	Mean	Std. Dev.	Min	Max
Property Characteristics				
Downtown Distance (miles)	1.69	0.94	0.04	4.96
Property Located Downtown?	0.04	0.19	0	1
Square Footage	1,710.46	657.98	504	9,116
Lot Size (Acres)	0.47	0.87	0.001	10.00
Home Age	47.39	37.77	0	219
Bedrooms	3.12	0.75	1	8
Bathrooms	1.93	0.73	1	6
Total Rooms	6.45	1.54	1	20
Number of Stories	1.50	0.49	1	3
Has Deck	0.23	0.42	0	1
Has Garage	0.90	0.31	0	1
Has Pool	0.03	0.18	0	1
Has Basement	0.71	0.45	0	1
Sale Price (Thousands of Real USD)	168.55	130.92	1.12	4,558.28
Neighborhood Characteristics				
Neighborhood Characteristics				
Neighborhood Median Age	38.48	6.75	20.90	64.10
Neighborhood Pct. Non-White	7.22	6.23	0.39	53.07
Neighborhood Pct. w/Bachelor's+	27.35	15.14	0.00	65.41
Neighborhood Unemployment Rate	7.00	6.18	0.00	59.83
County Population (in sale year)	132,041.90	58,444.84	28,177	230,159
City Population (in sale year)	26,354.97	10,726.36	3,072	50,315
N	28,028			

Table C.3: Summary statistics for homes sold in communities without an active MSP

Statistic	Mean	Std. Dev.	Min	Max
Property Characteristics				
Downtown Distance (miles)	1.40	0.97	0.01	5.00
Property Located Downtown?	0.07	0.25	0	1
Square Footage	1,591.71	627.11	500	9,548
Lot Size (Acres)	0.49	0.93	0.001	10.00
Home Age	53.65	35.68	0	219
Bedrooms	2.98	0.73	1	8
Bathrooms	1.70	0.69	0.50	6.00
Total Rooms	6.28	1.59	1	20
Number of Stories	1.35	0.46	1	5
Has Deck	0.29	0.45	0	1
Has Garage	0.84	0.36	0	1
Has Pool	0.03	0.18	0	1
Has Basement	0.52	0.50	0	1
Sale Price (Thousands of Real USD)	139.36	113.29	1.11	4,999.09
Neighborhood Characteristics				
Neighborhood Characteristics				
Neighborhood Median Age	39.50	6.30	19.60	76.50
Neighborhood Pct. Non-White	6.63	8.07	0.00	84.36
Neighborhood Pct. w/Bachelor's+	18.74	12.82	0.00	90.03
Neighborhood Unemployment Rate	6.99	5.96	0.00	83.87
County Population (in sale year)	93,017.11	56,512.14	13,022	230,159
City Population (in sale year)	20,404.11	16,549.80	704	65,358
N	179,929			

D. The Downtown Geocoding Process

Figure D.1 is a side-by-side illustration of Defiance, OH without (left) and with (right) the line-string used to denote the spatial extent of the downtown district. A line-string is a one-dimensional spatial object consisting of a sequence of points and the line segments that connect them. Hand-coding each downtown line-string relied on aerial imagery to identify the approximate point at which a street's concentration of downtown buildings and sidewalks gives way to less-dense land uses. Once the downtown line-string was coded, a GIS buffer operation was used to generate a polygon—extending 1/8 mile in all directions from the line-string—which denotes the "downtown district" (as illustrated in Figure 2 in the main text).

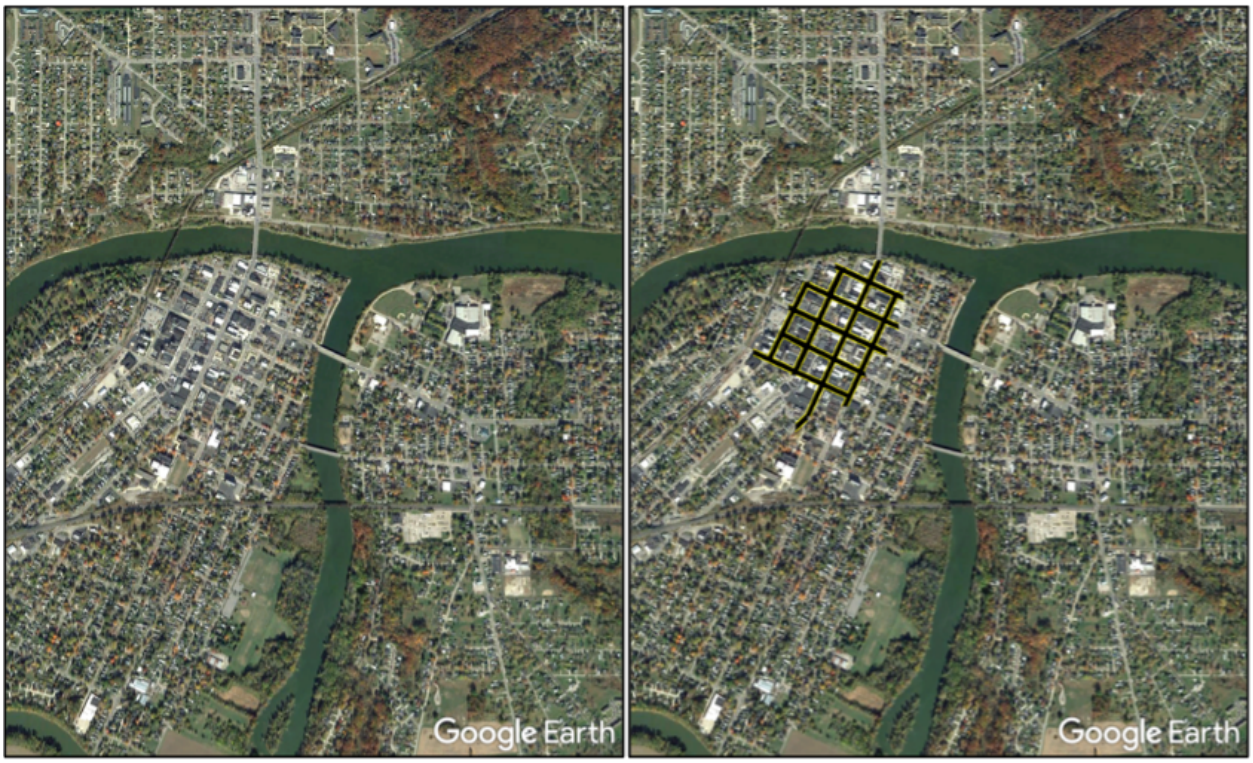

Figure D.1: Defiance, OH without (left) & with (right) geocoded downtown line-string

Figure D.2 uses the Google Maps "Street View" tool to compare the density of buildings on either side of a parking lot located along the primary retail corridor in Defiance, OH. Facing north, the "downtown" cluster of storefronts and civic buildings is visible; however, when facing south, the streetscape becomes less dense, with more residential land uses and deeper building setbacks. The parking lot is thus an example of the outer edge of the manually geocoded downtown district, which roughly approximates the extent to which a street's concentration of downtown buildings and sidewalks gives way to less-dense land uses.

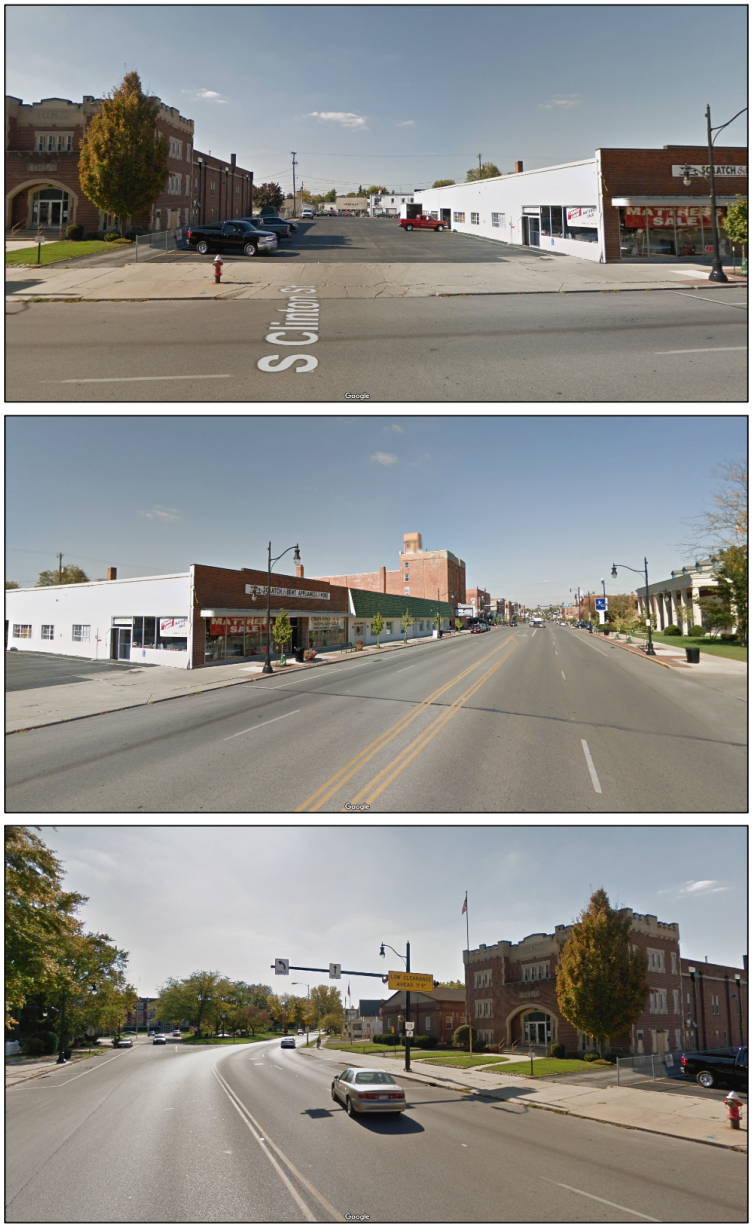

Figure D.2: Retail corridor building density comparison, Defiance, OH

E. Full "Base Model" Results

As the main text contains a truncated results table for the base model, the table below displays iterative specifications (in stages) for the full specification of the analysis.

Table E.1: Base hedonic price model, iterative specifications

	(1)	(2)	(3)	(4)	(5)	(6)
Property Located Downtown?	0.20***	0.06***	0.00	0.00	0.01	0.01
	(0.04)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Downtown Proximity	-0.32***	-0.08***	-0.04***	-0.04***	-0.05***	-0.03**
	(0.03)	(0.02)	(0.02)	(0.01)	(0.01)	(0.02)
Lot Size (log)		0.05***	0.04***	0.03***	0.03***	0.03***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Square Footage (log)		0.67***	0.56***	0.56***	0.56***	0.55***
		(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Home Age		-0.01***	-0.00***	-0.00***	-0.00***	-0.00***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Total Rooms		0.03***	0.03***	0.02***	0.02***	0.03***
		(0.01)	(0.00)	(0.00)	(0.00)	(0.00)
Stories		-0.01	-0.05***	-0.06***	-0.05***	-0.06***
		(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Neighborhood Median Age			-0.00	-0.00	-0.00	0.00
			(0.00)	(0.00)	(0.00)	(0.00)
Neighborhood Pct. Non-White			-0.02***	-0.02***	-0.02***	-0.01***
			(0.00)	(0.00)	(0.00)	(0.00)
Neighborhood Pct. w/Bachelors+			0.01***	0.01***	0.01***	0.01***
			(0.00)	(0.00)	(0.00)	(0.00)
Neighborhood Unemployment Rate			-0.01***	-0.01***	-0.01***	-0.01***
			(0.00)	(0.00)	(0.00)	(0.00)
Annual County Population			0.00***	0.00***	0.00***	0.00**
			(0.00)	(0.00)	(0.00)	(0.00)
MSP Adopted?				0.03	0.18**	0.12
				(0.03)	(0.08)	(0.08)
Proximity*MSP interaction					0.06**	0.05*
					(0.03)	(0.03)
Additional Controls	No	No	Yes	Yes	Yes	Yes
Region/Year Fixed Effects?	No	No	No	No	No	Yes
R^2	0.083	0.320	0.404	0.407	0.407	0.426
N	207,957	207,957	207,957	207,957	207,957	207,957

* p<0.10, ** p<0.05, *** p<0.01

F. Lag/Lead Interactions (And a Note on Causality)

Although they do not identify a causal relationship, my findings suggest a robust association between MSP adoption and a reversal of the downtown proximity-price gradient in subsequent years. On average, small-town homebuyers paid more for houses located farther away from downtown. However, for Ohio towns with an active MSP the proximity-price gradient flipped: homebuyers paid more for houses located closer to downtown. While some degree of endogeneity—between MSP adoption and local housing market outcomes—is probable (and expected), temporal heterogeneity in the estimated effect indicate that this study's findings are attributable to more than simple selection bias.

Using Table 3 as reference, the overall "downtown proximity" parameter is remarkably stable: the estimate persists at around -0.03 for all versions of the model, regardless of how the MSP adoption variable was coded. However, the interaction term estimate varies according to the relative time criterion (lag or lead) used to code the MSP adoption variable. The interaction is insignificant when MSP adoption is coded as a "leading" indicator (Columns 1 and 2). In other words, when the MSP adoption binary variable was coded to indicate that the MSP would be adopted up to 1 or 2 years after the time of the transaction, the interaction term—between MSP adoption and downtown proximity—was not statistically significant. This is to be expected, as the amenity premium associated with downtown proximity is unlikely to emerge until after program adoption. The interaction term is also statistically insignificant when MSP adoption is coded to reflect program adoption in the same year as the transaction (Column 3).

However, when the lag term interval increases—i.e., when the MSP adoption variable is coded to represent that the program was not only adopted by the time of transaction, but also that it had been in place for an extended period of time (1, 2, 3, and 5 years, corresponding with Columns 4 through 7)—the magnitude of the estimate is statistically and substantively significant. This suggests that, for communities that will adopt the MSP, the observed relationship between downtown proximity and price does not develop until adoption actually takes place. A causal design—such as a repeat-sale difference-in-difference model—would help account for selection bias, but this analysis nonetheless provides plausible evidence that the MSP does exert an influence on small-town housing market outcomes.

Figure F.1 illustrates the temporal dynamics of program implementation, based on the criteria used to code the "MSP adoption" variable. The values depicted in the figure (dots, connected by a solid line) are the estimates for the "Distance*MSP Adoption" interaction term, which reflect the sale price premiums attributable to an increase in downtown distance in communities with an active MSP. Not shown in the figure is the non-interacted distance term, which is the overall sale price premium attributable to an increase in downtown distance. The dotted line represents the net

"downtown proximity premium" which is what remains after accounting for the overall (i.e., not interacted with MSP Adoption) downtown proximity coefficient.

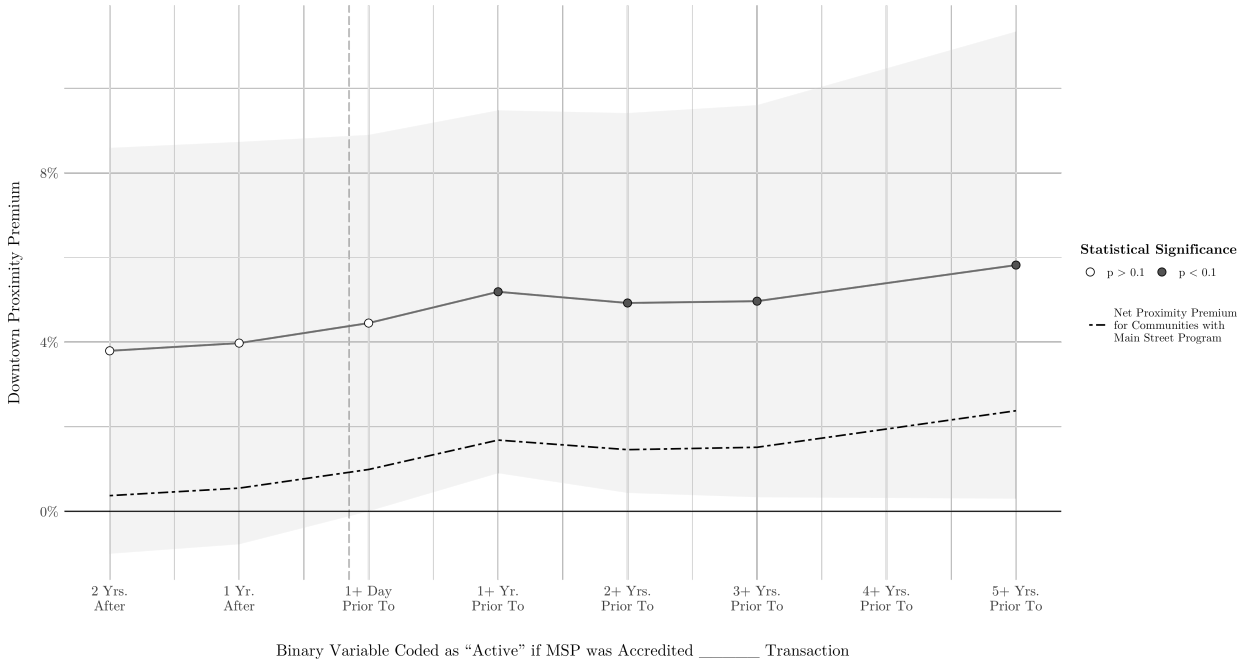

Figure F.1: Interaction term estimates based on "MSP adoption" lag/lead coding

G. Correlation Coefficients Between Model Variables

Table G.1: Summary statistics (key variables only)

Variable Name	Sale Price	Located Down-town	Lot Size	Square Footage	Home Age	Total Rooms	N'hood Age	N'hood % Non-White	N'hood % w/ Bchlrs	N'hood Un-empl.	County Pop.	Year of Sale	D'town Prox-imity	MSP In Place?
Sale Price	1													
Located Downtown	-0.11	1												
Lot Size	0.27	-0.16	1											
Square Footage	0.44	0.03	0.32	1										
Age	-0.43	0.29	-0.25	-0.22	1									
Total Rooms	0.25	0.08	0.14	0.62	0.03	1								
N'hood Median Age	0.17	-0.13	0.19	0.08	-0.17	-0.03	1							
N'hood % Non-White	-0.26	-0.02	-0.15	-0.08	0.15	-0.02	-0.29	1						
N'hood % w/Bachelors+	0.44	-0.11	0.17	0.35	-0.31	0.22	0.22	-0.15	1					
N'hood Unemp. Rate	-0.3	0.05	-0.13	-0.14	0.26	-0.07	-0.12	0.27	-0.3	1				
County Population	0.18	-0.11	0.02	0.05	-0.16	0.01	0.01	0.06	0.27	-0.1	1			
Year of Sale	-0.06	0	-0.02	0	0.18	0	0.19	0.08	0.09	0.31	0	1		
Downtown Proximity	-0.28	0.55	-0.32	-0.13	0.49	0.01	-0.27	-0.04	-0.29	0.13	-0.36	0	1	
MSP Adopted?	0.1	-0.04	-0.01	0.07	-0.06	0.04	-0.05	0.03	0.22	0	0.23	0.22	-0.12	1

H. Full Fixed Effects Coefficient Estimates

This appendix shows the full calendar year and region fixed effect estimates for the base model (which is shown in Table 2 in the main body of the manuscript). Table H.1 shows each year fixed effect estimate, and Table H.2 shows all region fixed effect estimates. The year fixed effect estimates roughly track with global and national macroeconomic trends: strong housing prices in the early 2000s, with prices reflecting the Great Recession starting in 2008. Recovery was slow than in most states, and only in 2018 and 2019 did prices again start to increase.

As for the regional fixed effects, no region demonstrated significantly different home prices (relative to Central Ohio) except for the Southeast Region, which contains the chronically distressed Appalachia region.

Table H.1: Calendar-year fixed effects of base model

	(1)
2001 Calendar Year	0.05***
	(0.01)
2002 Calendar Year	0.05***
	(0.01)
2003 Calendar Year	0.08***
	(0.01)
2004 Calendar Year	0.09***
	(0.01)
2005 Calendar Year	0.09***
	(0.02)
2006 Calendar Year	0.09***
	(0.01)
2007 Calendar Year	0.04**
	(0.02)
2008 Calendar Year	-0.06***
	(0.02)
2009 Calendar Year	-0.10***
	(0.02)
2010 Calendar Year	-0.12***
	(0.02)
2011 Calendar Year	-0.20***
	(0.03)
2012 Calendar Year	-0.19***
	(0.02)
2013 Calendar Year	-0.14***
	(0.02)
2014 Calendar Year	-0.08***
	(0.03)
2015 Calendar Year	-0.04
	(0.03)
2016 Calendar Year	-0.02
	(0.02)
2017 Calendar Year	0.03
	(0.02)
2018 Calendar Year	0.08***
	(0.02)
2019 Calendar Year	0.12***
	(0.02)
Observations	207,957
R^2	0.426

* p<0.10, ** p<0.05, *** p<0.01

Note: calendar year 2000 is used as the reference category

Table H.2: Ohio region fixed effects of base model

	(1)
Northeast Region	-0.07
	(0.05)
Northwest Region	-0.11
	(0.07)
Southeast Region	-0.17**
	(0.07)
Southwest Region	-0.02
	(0.05)
West Region	-0.01
	(0.07)
Observations	207,957
R^2	0.426

* p<0.10, ** p<0.05, *** p<0.01

Note: the Central Ohio region is used as the reference category