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

Andrew J. Van Leuven
The Ohio State University,
John Glenn College of Public Affairs
vanleuven.3@osu.edu

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Abstract

As part of their efforts to undo the effects of twentieth-century downtown disinvestment and automobile-oriented development, local stakeholders in many 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.

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1. Introduction

Consumed by a sprawling landscape of decentralized retail development—shopping malls, big-box stores, massive parking lots, and roadways hostile to pedestrians—many non-metropolitan communities 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 However, many such communities must confront the reality that their downtown business districts are outdated and uninviting, blighted by decades of disinvestment.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 as 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 or "rust belt" cities (McGahey and Vey, 2008). However, downtown revitalization has also become a common economic development approach in *non-metropolitan* areas (Faulk, 2006; Robertson, 1995). Designed to equip smaller towns and cities with the resources and know-how 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 smaller communities in the United States. However, very little evidence has been found to determine whether the program has its indented effect.

While there are a variety of criteria by which revitalization efforts may be evaluated, this study explores the relationship between a community's participation in the Main Street Program and the relative strength of its local housing market in 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 1) the presence of an active Main Street Program in the community and 2) the property's proximity to downtown.[1] The following section provides a brief history of the

[1]The geographic scope of this paper is limited to municipalities *outside* of larger metropolitan counties, many of which would not be colloquially described as *cities*, but rather as "small towns." While the word "downtown" may only evoke the image of a large city's central business district, I use the term throughout the paper to refer to a community's historic business district, regardless of the size of that community.

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

Insomuch that downtown disinvestment and deterioration are phenomena unique to the twentieth-century automobile era, downtown revitalization *per se* is a relatively recent concept. And unlike the blunt instruments of urban renewal, federal slum clearance programs, and cost-ridden "megaprojects" which dominated from the 1950s to the 1980s, recent attempts at revitalization are typically carried out by local stakeholders at a smaller scale (Mitchell, 2001) and focus on using *existing* community assets to rejuvenate the downtown district (Gratz and Mintz, 2000).

However, even in the contemporary era of downtown revitalization, approaches differ widely based on communities' size and resources. Populous cities in large metropolitan areas face a wider array of challenges, such as traffic congestion and crime, but also benefit from easier access to financial and political capital to mitigate them, as well as a stronger demand for city living (Heath, 2001). Conversely, small towns face fewer development hurdles—especially since their downtowns remain largely intact, unmarred by the demolition prevalent in urban renewal efforts (Faulk, 2006)—but also must rely on a narrower pool of resources. As such, small-scale, low-cost downtown revitalization strategies such as the Main Street Program are an appealing option for planners and key stakeholders in communities throughout the non-metropolitan United States.

2.1 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 traditional and historic commercial districts. It is designed around four "transformation strategies"—design, promotion, organization, and economic vitality—each a crucial component in the process of revitalizing and strengthening a community's

commercial district's economy (National Main Street Center, 2018). by capitalizing on the aesthetic and historical value of the buildings and civic spaces along the "Main" street that comprises its central, pedestrian-oriented retail district (Dono and Glisson, 2009).[2] Upon adopting the MSP, communities will hire a program director to coordinate its revitalization efforts, which may include holding large events such as festivals or farmers' markets, guiding property owners through the process for securing historic preservation grants or tax credits, providing technical assistance to business owners (e.g., teaching "best practices" for social media marketing), and acting as a facilitator within the networks of the local small business community (Loescher, 2009). While the program director will often oversee a small amount of state or federal grant money—usually intended for very specific projects such as façade improvement or streetscape enhancement[3]—their largest asset is the coalition of local stakeholders who deeply care about the fate and prosperity of the downtown district and consequently decide to volunteer their time and resources toward helping to revitalize Main Street.

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 (see Appendix A for more details), design, promotion, and organization are all components that can be directly influenced by a community's efforts to implement the MSP. 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 accomplished. In a study which surveyed communities to regarding their implementation of the MSP, it was found that, of the four transformation strategies, local program directors focused on economic vitality the least (Robertson, 2004). This is likely because design, promotion, and organization are all outputs (i.e., activities that individuals can perform), while economic vitality is an outcome, (i.e., the *result* of collective outputs). Evaluating outcomes requires much more than a

[2]Many municipalities do not contain an actual thoroughfare called "Main Street." In this paper I refer to any community's primary retail corridor—such as Liberty Street in Wooster, OH or Washington Street in Tiffin, OH—as its *Main* Street.

[3]An example of streetscape enhancement is the "streetscaping" projects that the Iowa Department of Transportation implements, in which communities are given funds to retrofit sidewalks, streetlights, benches, and other elements of the pedestrian environment. Such projects would be cost-prohibitive for a community to fund on its own, but the state DOT has rotating funds for communities to improve older streetscapes when necessary.

simple tally of dollars spent, volunteer hours logged, or events held. This difficulty may explain why a majority of previous research on the MSP has focused on its much more measurable components.

There are numerous possible means by which scholars may measure the "economic vitality" of a community. Most often, evaluations of economic development policies and programs focus on local labor market outcomes, such as wages and jobs (Bartik, 2002). In this paper, however, I focus on residential property sale prices as a way to observe how Main Street Program adoption may contribute to increased economic vitality in non-metropolitan counties. In the paragraphs below, I offer three explanations that motivate my use of local housing market outcomes as an operationalization of economic vitality in the years following the adoption of the MSP.

2.2 Main Street as a Differentiated Consumption Environment

A vibrant Main Street offers a differentiated shopping and entertainment experience for local residents and visitors. By organizing events and ensuring that the areas is safe and clean, the MSP director and his or her volunteers can transform Main Street into a *destination* for families, tourists, and shoppers. According to Glaeser et al. (2001), places that facilitate higher levels of interaction and consumption are more likely to thrive in the long term. 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). Housing prices often reflect the value of living withing close proximity of consumer amenities, especially in what Ahlfeldt and Maennig (2010) call "historic heritage sites."

However, the settlement patterns of smaller, nonmetropolitan municipalities (a description true for a majority of MSP participants) do not always mirror their larger urban counterparts; buildings and firm densities remain relatively high in the town center, but residential land uses are usually quite sparce in nonmetropolitan downtowns (Howie et al., 2010).[4] Compared to more populous urban downtowns, smaller town centers simply do not support an equivalent level of pedestrian activity during all hours of the day. Nevertheless, this difference does not necessarily mean that

[4]While the outlying areas of a smaller, nonmetropolitan municipality are typically not referred to as "suburbs," they still mirror the pattern of "sprawl" development (see Brueckner, 2000; Galster et al., 2001) in 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).

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 draw success from assets such as a nearby university or steady state and county government employments—revitalization efforts can substantially improve a small community's likelihood of leveraging its historic downtown district as an amenity for its residents.

If the Main Street Program succeeds in reviving downtown, then Main Street will become a stronger destination for retail and entertainment: 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—working to incrementally replace empty sidewalks and automobile traffic with pedestrian traffic and social interaction (Robertson, 1993a,b)—is a positive feedback loop: the more that 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. The success of this effort should thus be captured in the sale prices of nearby homes, with a premium being placed on nearby access to Main Street as a consumer amenity.

2.3 Main Street as a Historic Preservation Landmark

A pivotal component of the Main Street Program is its emphasis on historic preservation and design (Robertson, 1997; Wells, 2016). Compared to shopping malls and big-box stores—all built in the era of the automobile—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 (see also Boehlke, 2012).

Compared to the literature regarding Main Street as a consumption amenity, the link between property values and historic preservation has been much more extensively studied (see Ryberg-Webster and Kinahan, 2014). In a hedonic price analysis of several cities in Texas, Leichenko et al. (2001) found that historic designation was highly associated with higher home values. This finding

has been 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).

However, there are some deeper insights to be gleaned from studies about historic preservation, beyond its mere effect on property values. Coulson and Lahr (2005) studied several historic neighborhoods in Memphis, some having official historical landmark designation and others without any designation. Overall, they found that homes in officially designated historic neighborhoods sold for higher than their non-designated equivalents, though the effect may be partially explained by the strict maintenance standards imposed by the designation agency. When studying the difference between national and local preservation agencies, (Schaeffer and Millerick, 1991) observed that designation at the national level had a positive impact. However, designation at the local level (in this case Chicago Historic Districts) had a negative impact, which the authors suggest may be due to the higher regulatory burden imposed by the local preservation agency. Finally, Listokin et al. (1998) point out that historic preservation, while an important contributor to housing and economic development, is only an effective tool in limited quantities. The ability of a historic district to improve neighborhood quality or to elevate property values is diluted when too much of the built environment is being preserved.

The mostly symbiotic relationship between historic preservation and residential property values serves as a second rationale for the hypothesis that the Main Street Program may positively influence the sale price of houses located near downtown. The program prioritizes transforming *existing* assets above building new developments and attempts to cultivate a welcoming atmosphere and design aesthetic that revolves around 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.[5]

[5]Due to a lack of consistent data availability, I do not utilize any specific variables to control for a property or neighborhood historic designation (or lack thereof). However, this shortcoming is mitigated in some degree by the construction of the study universe (see the "Data" section), which restricts observations to only those properties in communities with a *pre-automobile-era* central business district. Using the recognized cutoff of roughly fifty years (of Historic Places, 1990), all downtown districts that pre-date the automobile era (i.e., 1940 and earlier) are considered "historically significant," and local consumers are unlikely to discern marginal differences in building age and quality.

2.4 Main Street as a 'Walkable' Alternative to Automobile-Oriented Living

Retail establishments and public spaces along Main Street offer a pedestrian-oriented, or "walkable" built environment for those who live nearby. Similar to its potential role as a differentiated retail and entertainment destination, walkability likewise involves pushing back against the status quo of car-oriented development associated with decentralization and sprawl (Duany et al., 2001; Speck, 2013). However, walkability in this context entails more than simply leveraging Main Street as a pedestrian-oriented shopping corridor. Instead, the "walkability premium" (Yin et al., 2020) for properties near downtown involves the potential for homeowners to complete everyday errands—at destinations such as the grocery store, post office, and salon—without needing to use a personal vehicle or public transit. The freedom from automobile travel is the exact antithesis of sprawl, which Hamidi et al. (2015) primarily characterize in terms of poor accessibility.

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." Song and Knaap (2004) measured walkability in terms of residential proximity to both public parks and "neighborhood commercial land uses" in Portland, finding a positive relationship between house prices and walkability in predominately mixed-use neighborhoods. However, in majority single-family residential neighborhoods, no such walkability premium existed. A similar study by Rauterkus and Miller (2011) replicated this finding in Birmingham, Alabama, adding that properties in car-dependent (i.e., low walkability) locations had higher values as distance from downtown increased. 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 Main Street's provision of a walkable residential environment is not an *absolute* benefit, but rather that it is contextual on the historical roots of the neighborhood's built environment. In other words, residents of car-dependent (and prospective homebuyers searching in) suburban-style neighborhoods built post-1950 are unlikely to put a premium on walkable, mixed-use development. However, residents and prospective homebuyers in the of older parts of town—

previously served by pedestrian-scale retail and dining options prior to the advent of the car—may be very receptive to walkable development such as a newly-revitalized Main Street corridor.

Demand for walkability is also dependent on consumer preferences. Although a preference for decentralized, car-oriented development is the overwhelming norm in the United States (Kolko, 2020), there is still a strong demand for walkable neighborhoods among various segments of the population. A survey conducted by Myers and Gearin (2001) found that older home buyers prefer denser, more walkable housing options. This finding is especially salient, as members of the "baby boomer" generation are increasingly living without children in the home and need to downsize. Research by Lee and Tan (2019) suggests that vibrant Main Streets perform dual functions as both walkable amenities and hubs for social connectedness, finding strong demand among older adults for a wider availability of "third places" within walking distance, for easier social gathering and interaction.

Frank et al. (2019)—see also Leinberger and Alfonzo (2012)—observe that walkable neighborhoods, while not a majority preference, are nonetheless *under-supplied* relative to demand. They suggest that the real estate industry has yet to embrace "unmet demand" for higher-density, mixed-use, walkable development because of their higher risk and capital cost relative to the straightforward, lower risk process of developing a typical suburban subdivision. Main Street revitalization provides an opportunity to increase property values of properties close to and within downtown without having to wait for residential developers to deem it cost-effective.[6]

2.5 Property Values as a Useful Measure of Local Economic Vitality

Taken together, the three previous sections illustrate Main Street's potential 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) and neighborhood revitalization (Ki and Jayantha, 2010) on nearby residential property values, but these studies focus chiefly on highly populous cities in metropolitan areas. To my knowledge, this is

[6] A study prepared for the Iowa Economic Development Authority (Lipsman et al., 2014) found that upper-story housing in buildings located along commercial corridors are less than 25% occupied and represent a relatively cost-effective opportunity for future downtown housing development.

the first study to examine the relationship between downtown revitalization efforts and residential property values in a rural or micropolitan context.

Non-metropolitan planning and economic development efforts are certainly different in from their metropolitan counterparts in a number of ways (Hibbard and Lurie, 2019), but the Main Street Program is, by design, strongly compatible with the needs of smaller—often rural—communities. In describing the difference between downtown districts of small towns versus large urban areas, Robertson (1999) emphasizes size and scale, noting that, whereas metropolitan downtowns are larger both vertically (taller buildings) and horizontally (divided into districts), nonmetropolitan 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 its benchmark for success.

Economic vitality is an inherently ambiguous concept, and evaluations of the MSP must account for the variety of ways in which it may bring about positive economic outcomes within a given community. In this paper, I define a community's economic vitality in terms of its local housing market and examine the ways in which the MSP transforms smaller town centers into amenities valued by local homeowners. When the MSP is implemented successfully, stakeholders in a community can convert its undervalued downtown district—already replete with historic properties and walkable streetscapes—into a 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 that took place in non-metropolitan

Ohio communities from 2000 to 2019. Data regarding the property transaction date and price, geographic location, and structural characteristics come from First American DataTree (2020). Among the structural characteristics in the dataset are variables such as lot size, number of rooms, and the age of the structure.[7] 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.[8] Table 1 includes summary statistics for the key variables used in the analysis.

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.[9] While there are several neighborhood characteristics that the chosen variables do not account for (e.g., median income or population density), these are highly correlated with the variables already in the model and are thus omitted.

The final source of data was the year when each community joined the Main Street Program, taken either available from the state program's web page or received via email correspondence with the state MSP director. This variable was used to create a dummy variable indicating whether the municipality had adopted the MSP at the time of the sale.

3.1 The Universe of the Study

Only a select subset of municipalities within a given state are comparable. Some communities were incorporated prior to the automobile era and are home to a traditional downtown district with dense

[7] Most real estate assessment and transaction datasets (e.g., DataTree, Zillow ZTRAX, or CoreLogic) contain an enormous quantity of parcel characteristics, often numbering in the hundreds. Variables such as "year built" or "square footage" are salient to most studies, while the relevance other variables—such as the mortgage term length or school district tax rate—are wholly dependent on the context of the research question.

[8] Of the twenty variables that appear most often in hedonic pricing model studies (Sirmans et al., 2005), I use between six and eleven in the analysis. Sensitivity checks (i.e., experimentation by adding or subtracting specified variables) reveal the overall findings to be quite robust in terms of both the sign and magnitude of the estimates.

[9] While demographic variables were asked in both the 2000 and 2010 Census questionnaires, variables concerning education and employment/income were only available in the 2000 Census, relegated to the American Community Survey (ACS) rather than the 2010 Census. Use of the ACS for block-group education and employment data is not ideal but is the best available source of neighborhood-level characteristics in 2010.

Table 1: Summary Statistics

	Property Characteristics			
	Mean	Std. Dev.	Min	Max
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%
MSP Adopted?	0.13	0.34	0	1

N = 207,957

storefronts and historic architecture. Other places (often incorporated as "townships") only became substantially populated in the last fifty years, previously home to mostly undeveloped or agricultural land. Thus, an analysis that does not account for this heterogeneity would fail to capture the true influence the MSP within downtown business districts. I used the following guidelines to create an analytical universe, containing only communities that are appropriate for comparison in a hedonic price analysis. The analytical universe consists only of Ohio municipalities that:

- *Were located in a non-metropolitan county or were more than 15 miles away from a MSA's principal city.* Most Main Street Program participants are communities that already fit this

description, but the MSP has been adopted by some neighborhoods in larger urban areas (e.g., Lakewood, Ohio's "Detroit Avenue" corridor, which is only a 15-minute drive from Downtown Cleveland). Because the Main Street Program is a smaller-scale approach, this rule filters out those municipalities that are too close to the orbit of large urban housing markets where the MSP would be unlikely to make an impact.

- *Had a 2019 population of between 750 and 60,000.* There are already very few non-metropolitan municipalities in the universe larger than 60,000 residents.[10] However, Ohio has several hundred municipalities of fewer than 750 residents, which are too small to make appropriate comparisons with property transactions in larger towns and cities.
- *Had a 1920, 1930, or 1940 population of at least 1,000.* This is a rough heuristic for whether a given municipality contains a pre-automobile-era downtown business district.

Following these guidelines reduces the 1,200+ Ohio municipalities down to a list of 213. Transactions from the First American assessor records database were only kept if the corresponding property was located within a five-mile radius of one of the 213 communities in the analytical universe.

3.2 Geographically Generated Variables

There is no existing dataset which demarcates the spatial boundaries of the downtown district for each community in the study universe. For towns that serve as a county seat, the business district is typically located near the county courthouse; however, Ohio has only 88 county seats, and there are over 200 communities in the analytical universe. Thus, I manually coded for the spatial boundaries of all 213 downtown districts by using satellite imagery to identify the geographic transition point between downtown and less-dense adjacent land uses.[11] 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 edge lines that surround the downtown) and the 'centroid' (the geometric center point of downtown). I used ge-

[10] The populations used for creating the study universe are from the 2019 Subcounty Total Resident Population Estimates, released by the U.S. Census Bureau in May 2020. The year 2019 coincides with the final year of data availability for the DataTree real estate dataset used in this study.

[11] See Appendix B for a graphic example of a geocoded downtown district.

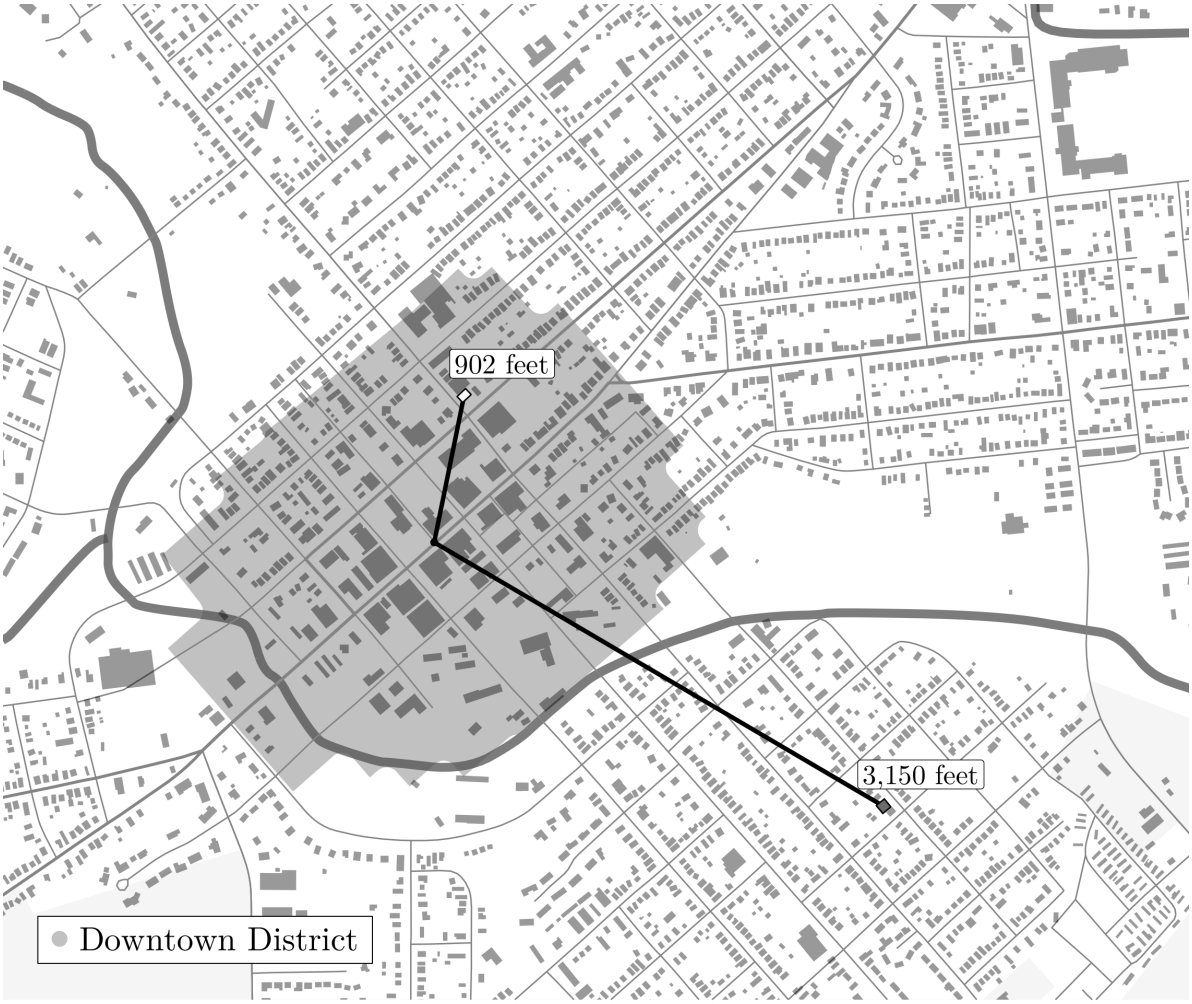

Figure 1: Illustration of Distance Variable, Inside and Outside Downtown District

ographic information systems (GIS) to generate two additional variables from these geographic representations. First, 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. Second, I computed a geographic dummy variable to indicate whether a property was inside the downtown district polygon. Respectively, these variables allow for the measurement of a premium associated with both 1) being located in close proximity to downtown and 2) being located *inside* the downtown district.[12] These two variables are illustrated in Figure 1, which shows the distance between two different houses and the centroid of the downtown district in Washington

[12]It is possible that being located inside downtown is actually a *disamenity* due to the nature of downtown streets, which entail high traffic, pollution (both noise pollution and automobile exhaust), and a lack of convenient parking.

Court House, OH. The property shaded white is both closer to downtown and located inside the downtown district; the property shaded black is located outside of downtown and is further away.

4. Empirical Strategy

To examine the influence of the MSP on nearby property values, I employ a hedonic price model which controls for the relevant property and neighborhood characteristics of single-family houses in a community and identifies the share of their sale prices attributable to both 1) the presence of an active Main Street Program in the community and 2) the distance between the property and the downtown district. I use the following equation:

$$Y_itj = f(\alpha X_{itj} + \alpha N_{itj} + \beta D_{ij} + \gamma MSP_{itj} + \delta D * MSP_{itj} + \epsilon_{itj})$$

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 distance from the property to the center of the downtown district,[13] and 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. In the results below, I report standard errors clustered by county, and my parameter of interest, δ, is an interaction between distance and MSP status and estimates the relationship between a home's sale price and its proximity to a downtown with an actively participating Main Street Program.

Even when limiting observations to property transactions that took place in the relatively specific context of small towns in Ohio, there is still a wide spectrum among the characteristics of the properties sold within the 213 communities of the study universe. Because of this extensive heterogeneity, I transformed several variables specified in the model in order to prevent bias. First, I filtered out extreme outliers by placing upper and lower limits on the type of properties observed in the analysis.[14] Second, I used the natural logarithm form of several continuous variables—lot size,

[13] For all regressions in this paper, the distance variable is specified as the natural logarithm of linear distance (miles from the parcel to the centroid of the downtown district). However, upon testing alternate functional forms, such as the *log of distance-squared*, the estimated coefficients of the parameters of interest change very little, if at all.

[14] I limited observations to a maximum sale price of $5 million, maximum lot size of 10 acres, maximum number of bathrooms and bedrooms to 6 and 8 respectively, and limited square footage to a range between 500 and 10,000 ft^2. These limitations shrink the size of the dataset by less than 10% but have only a trivial effect on the coefficients estimated in the analysis.

square footage, distance from downtown, and sale price—with skewed distributions. Using a logged dependent variable makes interpretation of the results slightly more challenging, but the alternative (a linear regression of raw sale prices) would be far more problematic. Finally, in order 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" hedonic price model (Table 2 below), I performed two additional variants to gauge the robustness of the main findings. First, I modified the *Main Street Program status* variable to account for different time lags between the year in which a community adopted the MSP and the month in which a given property sold. In the base model, the MSP variable is a binary variable indicating whether the MSP was adopted in the community two years prior to the home sale, as two years is an appropriate time delay in which the program can be expected to be fully implemented. To test the sensitivity of this relationship, I generated a series of additional dummies to indicate whether the MSP had been adopted as of zero years prior, one year prior, three years prior, and five years prior to the sale. I run a separate hedonic price model that uses each version of the MSP adoption status variable (see Table 3). While mostly useful as a robustness check, I also run two additional variants of the model, in which the MSP adoption status variable is coded as a "lead" (rather than lag) term.[15] For any given variable 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 that is 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).

In the base model and the time-lag variations models (see Tables 2 and 3 respectively), the observed transactions include all properties within municipal limits (with a five-mile cutoff for parcels on the outskirts of communities with very large municipal boundaries). However, in the second variant of the base model I place a narrower geographic restriction to exclude those properties outside of a one-mile or 1.5-mile radius around the downtown district (as illustrated in Figure 2). As described

[15]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 occurred yet. A "false-positive" (a significant estimate for the lead term) suggests that something unobserved is driving the effect, not the treatment.

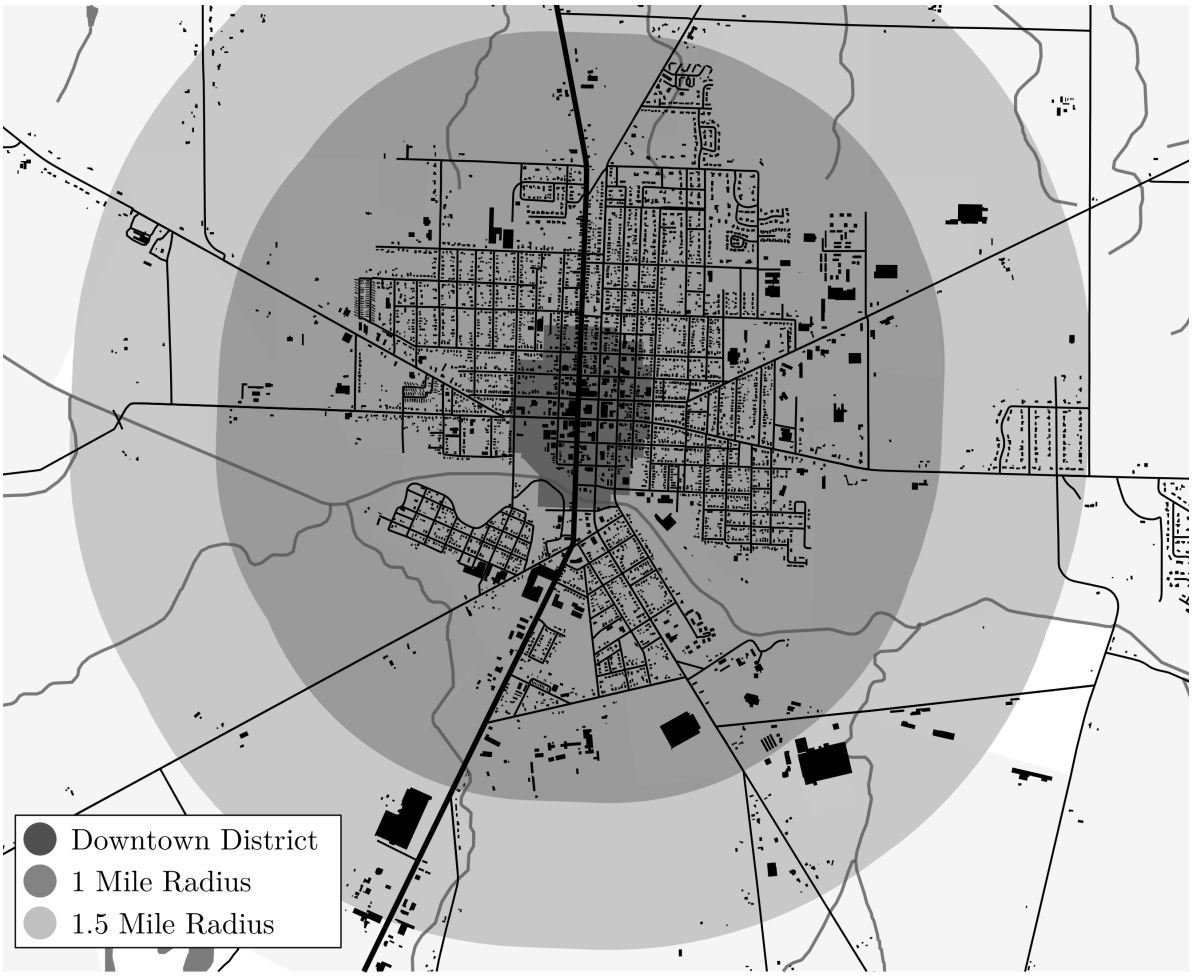

Figure 2: Example of Distance Buffers Surrounding Downtown District in Kenton, OH

in the "Background and Motivation" section, the provision of walkable and historic amenity district may not be appealing to homebuyers with a preference for suburban-style development. Thus, by restricting observations in the model to parcels that are within walking distance of downtown, the results may represent a more accurate estimate of the influence of downtown revitalization efforts for homebuyers with a preference for dense, walkable environments.

5. Results

Table 2 reports the main results of the analysis. Each of the five columns shows a different stage of the base model: Model 1 started with the two distance variables, Model 2 added the vector of structural characteristics, Model 3 added the vector of neighborhood characteristics, Model 4 added

the variable indicating Main Street Program adoption status, and Model 5 (the full "base" model) added the interaction term between MSP adoption status and distance to downtown.

Table 2: Coefficient estimates for various specifications of hedonic price model

	(1)	(2)	(3)	(4)	(5)
Downtown Distance	0.32***	0.08***	0.07***	0.07***	0.07***
	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Property Located Downtown?	0.20***	0.06***	0.03*	0.02	0.03*
	(0.04)	(0.02)	(0.02)	(0.02)	(0.02)
Lot Size (log)		0.05***	0.03***	0.03***	0.03***
		(0.01)	(0.01)	(0.01)	(0.01)
Square Footage (log)		0.67***	0.55***	0.54***	0.54***
		(0.03)	(0.03)	(0.03)	(0.03)
Home Age		-0.01***	-0.00***	-0.00***	-0.00***
		(0.00)	(0.00)	(0.00)	(0.00)
Total Rooms		0.03***	0.02***	0.02***	0.02***
		(0.01)	(0.00)	(0.00)	(0.00)
Stories		-0.01	-0.03	-0.04*	-0.04*
		(0.03)	(0.02)	(0.02)	(0.02)
Neighborhood Median Age			-0.00	-0.00	-0.00
			(0.00)	(0.00)	(0.00)
Neighborhood Pct. Non-White			-0.02***	-0.02***	-0.02***
			(0.00)	(0.00)	(0.00)
Neighborhood Pct. w/ Bachelor's or Higher			0.01***	0.01***	0.01***
			(0.00)	(0.00)	(0.00)
Neighborhood Unemployment Rate			-0.01***	-0.01***	-0.01***
			(0.00)	(0.00)	(0.00)
MSP Adopted?				0.05*	0.21**
				(0.03)	(0.09)
Distance*MSP interaction					-0.07**
					(0.03)
Additional Structure Characteristics?	No	No	No	Yes	Yes
Observations	207,957	207,957	207,957	207,957	207,957
R^2	0.083	0.320	0.400	0.404	0.404

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

Downtown proximity and MSP adoption are the key variables in the analysis. When looking solely at a property's spatial relationship to downtown, the results of the base model (Table 2, Column 5) indicate that a one percent increase in a property's distance from downtown was associated with a seven percent higher sale price. In other words, the sale prices of properties further from downtown were higher relative to those that sold closer to the town center. However, when considering the interaction of both downtown distance and MSP adoption status together, the relationship is inverted: for houses that sold in a community with an active MSP, a one percent increase in a property's *proximity to* downtown was associated with a seven percent higher sale price. In other words, the presence of the MSP serves to counteract the overall influence of distance in participating communities. There is also a small premium for properties sold inside the downtown district, which sold for 3% higher than those outside of downtown, all else constant. These results, while modest, suggest that the Main Street Program is a promising vehicle for transforming downtown into an amenity desired by homebuyers.

Because of the likelihood of selection bias, the coefficient for the MSP adoption variable must be interpreted with caution. The estimate suggests that, on average, houses sold for 21% higher in communities with an active MSP. However, the estimate of 21% is *not* part of a causal claim.[16] 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. In other words, there are systematic commonalities that influence the behavior of the local housing market in the communities that adopted the program, and—while the MSP is among the characteristics that those communities share in common—this study's empirical model does not test for causality. The more meaningful element of the model is the interaction term, which suggests a proximity amenity for *downtowns in MSP-participating communities* and is robust to a variety of alternate specifications.

[16]The hedonic price model is able to describe the relative associations between observed transaction prices and relevant variables, all else held constant. However, it cannot answer the "but for" question, which asks what a given property—which sold in an MSP-participating community—would have sold for if the community were *not* participating in the program. Future extensions of this research may attempt to explore the causal linkages between MSP adoption and local housing market outcomes.

Table 3: Estimated coefficients for Distance & MSP variables, by 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)
Property Located Downtown?	0.03*	0.03	0.03*	0.03*	0.03*	0.03*	0.03
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Downtown Distance	0.07***	0.07***	0.07***	0.07***	0.07***	0.07***	0.07***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
MSP Adopted?	0.15*	0.16*	0.18**	0.20**	0.21**	0.22**	0.27**
	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.10)
Distance*MSP interaction	-0.04	-0.05	-0.06*	-0.07**	-0.07**	-0.07**	-0.09**
	(0.04)	(0.04)	(0.03)	(0.03)	(0.03)	(0.03)	(0.04)
Observations	207,957	207,957	207,957	207,957	207,957	207,957	207,957
R^2	0.4	0.4	0.4	0.4	0.4	0.4	0.4

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

5.1 Temporal Lag Between MSP Adoption and Transaction Date

Broadly, the results shown in Table 2 indicate a positive relationship between downtown distance and sale price which may be offset by downtown revitalization efforts in communities with an active MSP. However, these findings originate from a model specification in which the MSP adoption variable is coded with a two-year lag (i.e., when the community had adopted the program at least 24 months prior to the property transaction). Table 3 reports how the key estimates vary as the MSP adoption variable is coded for different lag periods.

The downtown distance variable remains steady for all five variations of the lag period for MSP adoption, suggesting a robust relationship between distance to downtown and home sale prices in non-metropolitan communities across Ohio. However, a different pattern emerges when looking at the interaction between distance and MSP adoption. For houses that sold for the first 12 months after the MSP was adopted in a community, the Distance*MSP interaction (-0.06) was too small

to counteract the overall distance effect (0.07).[17] However, when the MSP variable was coded as a one, two, or three-year lag the interaction term was large enough (-0.07) to evenly balance out the overall distance effect. Finally, when program adoption is coded as the MSP having been in place for at least *five years* at the time of the transaction, the Distance*MSP interaction becomes larger (-0.09) than the overall distance effect. This means that, for houses sold in a community with a Main Street Program, the marginal effect of distance is not only negated, but is actually reversed: houses further away from the central business district actually sell for less than their downtown-proximate counterparts. While a lack of causal identification makes interpretation only speculative, it is plausible that downtown would not emerge as a known amenity for homebuyers until the MSP reaches maturity.

5.2 Narrowing Observations Geographically

Rather than focusing on the time of MSP adoption relative to the transaction date, Table 4 presents a second variation on the base hedonic price model which adjusts for observations' proximity to the central business district. As explained in the previous section, the models reported in Table 4 use a tighter radius around downtown (see Figure 2) in order to omit properties from the analysis which are unlikely to appeal to homebuyers with higher preferences for density and walkability. Column 1 of Table 4 presents 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, I significantly reduce the value of N from a total of over 200 thousand to around 125 thousand (within a 1½-mile radius) and further down to around 85 thousand (within a 1-mile radius).[19]

[17] The statistically significant coefficient on the "year of sale" MSP variable indicates an *instantaneous* influence of the program on the housing market. This suggests the possibility that the observed association between MSP adoption and home sale prices is not fully attributable to program adoption in itself, but rather, to the momentum and enthusiasm among local stakeholders to revive their downtown. This makes sense, as the nominal "adoption" of the MSP is not an on/off switch, but rather a designation that programs can be accredited with once their MSP-related efforts are in full swing.

[18] Across all three results tables, the "base model" is identical in terms of specification: Model 5 in Table 2, Model 3 in Table 3, and Model 1 in Table 4.

[19] Narrowing the radius of observations to only a one-mile radius around the central business district is not as drastic of a change as might be expected. Because the study universe only includes communities in non-metropolitan counties (or at least15 miles away from an MSA's principal city), the majority of communities in the analysis are already quite small. When restricting observations to parcels within a 1- or 1½-mile radius around the downtown district, an average of only about 36% or 18% of municipal land respectively remains unobserved. In other words, the geographic narrowing of the study area—to either a 1- or 1½-mile radius around downtown—is an appropriate restriction of the small towns being studied.

Table 4: Estimated coefficients for Distance & MSP variables, by downtown proximity

	Properties within _____ Radius from Downtown		
	Entire Municipality	Within 1.5 Miles	Within a Mile
	(1)	(2)	(3)
Property Located Downtown?	0.03*	0.02	0.02
	(0.02)	(0.02)	(0.02)
Downtown Distance	0.07***	0.06**	0.05*
	(0.02)	(0.02)	(0.03)
MSP Adopted?	0.21**	0.28***	0.28***
	(0.09)	(0.11)	(0.08)
Distance*MSP interaction	-0.07**	-0.11**	-0.11***
	(0.03)	(0.05)	(0.04)
Structure Characteristics?	Yes	Yes	Yes
Neighborhood Characteristics?	Yes	Yes	Yes
Observations	207,957	125,309	86,152
R^2	0.404	0.357	0.322

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

In Model 2, the overall effect of downtown distance decreases from that of the base model, such that a one percent increase in distance from downtown is only associated with a six percent increase in home-sale price. Model 2 also estimates a much stronger interaction between MSP adoption and downtown distance, indicating that a one percent increase in distance from downtown is associated with an eleven percent decrease in sale price. Thus, the overall 6% distance premium—for being located farther away from downtown—was offset by an even larger premium for being located *closer* to downtown when the property sold in a community with an active MSP. The results of Model 3 are nearly identical to those of Model 2, except the overall effect of downtown distance is even further decreased. Taken together, these results suggest an even greater influence of downtown as a potential real estate amenity for homebuyers looking at parcels located closer to the denser, more walkable parts of town.

6. Discussion & Conclusion

The central aim of this study was to examine the relationship between downtown revitalization efforts and local housing market outcomes in order to observe the influence of the Main Street Program as a potential catalyst of downtown economic vitality. To accomplish this, I employed a series of hedonic price models to estimate the relative associations between a given residential property's proximity to downtown and its sale prices. By including an interaction term between downtown proximity and the presence of an active Main Street Program, I was able to identify whether adopting the program made a difference in downtown's status as a real estate amenity.

The empirical analysis—which used sale prices of single-family homes in communities throughout non-metropolitan Ohio as the unit of observation—found that, on average, that a one percent increase in distance from downtown is associated with a seven percent increase in sale price. However, in communities with an active MSP, this effect is counteracted, as a one percent increase in proximity to downtown is associated with a seven percent increase in sale price. For communities with a "mature" Main Street Program (i.e., in place for at least five years prior to the transaction), the interaction of distance and MSP adoption is such that a one percent increase in proximity to downtown is associated with a nine percent increase in sale price. The net result is a modest premium on downtown proximity in communities where the MSP has been in place long enough for homebuyers to recognize the advantage of downtown as an amenity. The downtown proximity premium is even larger when the geographic scope of the analysis is limited to only those properties within a one-mile radius around the downtown district, suggesting that the perception of downtown as amenity is strong among homebuyers with a preference for housing in the older, more walkable part of town.

6.1 Implications for Practice and Research

The hedonic price model is a methodological tool commonly used estimate the implicit prices of relevant amenities and disamenities by accounting for local price heterogeneity in the housing market (Rosen, 1974). However, to my knowledge, this is the first study to use a hedonic price model to explore the influence of downtown revitalization efforts such as the Main Street Program on

local housing market outcomes. As such, this study contributes a number of insights for planners, economic development practitioners, and scholars interested in downtown revitalization.

First, although they do not identify a *causal* relationship, my findings strongly suggest that the MSP aids in the transformation of the downtown district. In the average Ohio small town, homebuyers paid more for houses located farther away from downtown. However, for Ohio towns with an active MSP the distance-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 provides an indication that this study's findings are attributable to more than simple selection bias.

Using Table 3 as reference, the overall "downtown distance" parameter is remarkably stable, as the point estimate persists at 0.07 for all versions of the model, regardless of how the "MSP adoption" binary variable is coded. However, the estimated value of the *interaction term* varies according to the relative time criterion used to code the MSP adoption variable (as illustrated in Figure 3).[20] The interaction is insignificant when MSP adoption is coded as a "leading" indicator (Models 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 said MSP adoption variable and downtown distance—was not statistically significant. This is to be expected, as the amenity premium associated with downtown proximity is unlikely to be established until after the program is in place.

However, when the MSP adoption variable is coded to properly reflect that the program had been adopted as of the transaction date, the interaction term is statistically significant (Model 3). Furthermore, 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 Models 4, 5,

[20] Figure 3 illustrates the temporal dynamics of program implementation, based on the criteria used to code the "MSP adoption" variable. The values depicted in the figure 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 estimate of the overall distance premium is a constant 0.07 across all model specifications. Thus, on net, the actual "downtown proximity premium" only exists when the MSP adoption variable is coded as a 3+ year lag.

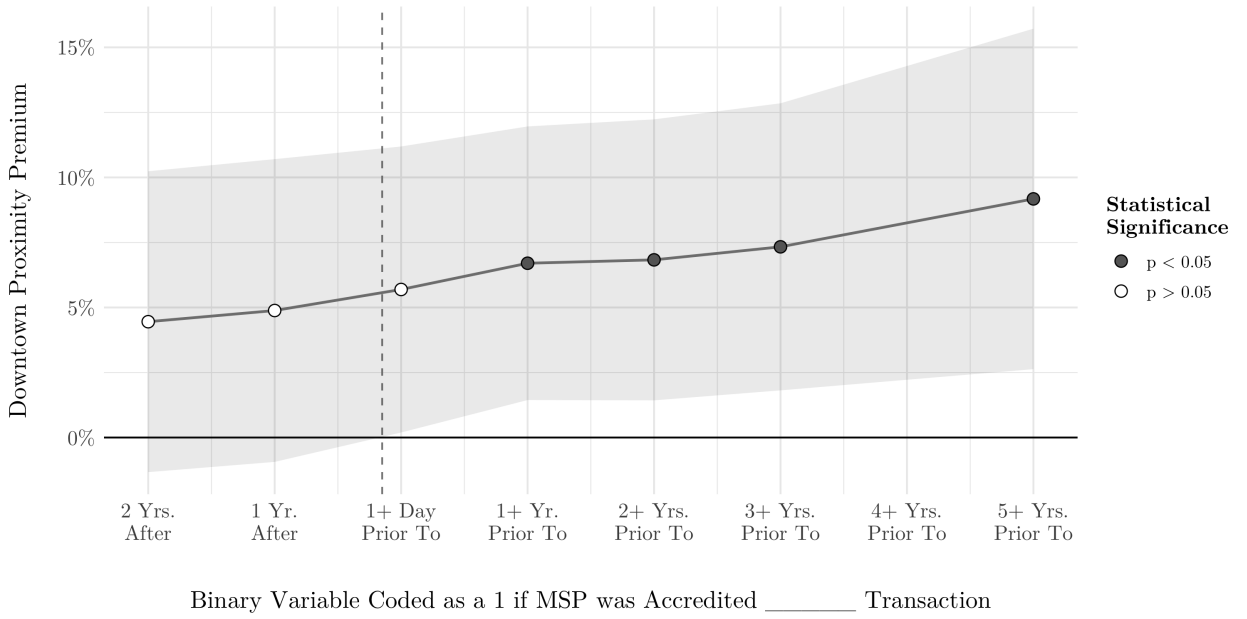

Figure 3: Changes in interaction term estimate based on MSP adoption variable coding

6, and 7)—so too does the magnitude of the estimate. This suggests that the observed relationship between downtown distance and price does not take hold in those communities that *will* participate in the MSP until the time in which adoption actually takes place. While a causal design—such as a repeated sales difference-in-difference model—would help to fully eliminate the ambiguity posed by the presence of selection bias, this paper's analysis nonetheless provides robust evidence that the MSP does, in some part, exert an influence on small-town housing market outcomes.

While these findings point to the role played by the MSP in downtown revitalization, they must be framed in the proper economic and geographic contexts. Because rural labor markets are not as tight as metropolitan labor markets (Swenson and Otto, 1997), residents of non-metropolitan counties are more likely to commute long distances, resulting in a geographically extensive commuter shed (Aldrich et al., 1997). Rural housing market areas are likewise expansive, and downtown-adjacent neighborhoods in small towns comprise only a comparatively small submarket within the larger regional market (Rothenberg et al., 1991). In this context, therefore, it is important to recognize that the Main Street Program is a small-scale placemaking effort that likely does not generate an *absolute* increase in regional housing demand. Rather, through the coordinated efforts of local

stakeholders to transform a community's downtown retail district into a more attractive and vibrant place, 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 the ramifications of this finding are significant for planners in declining rural communities. Walkable historic business districts are one of very few assets possessed by smaller, older communities attempting to hold back a nearly ubiquitous landscape of automobile-centered 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. Unlike other neighborhoods and retail districts, a vibrant, revitalized downtown provides a physical space in which social capital is created and reinforced (Jacobs, 1961; Talen and Jeong, 2019). Higher levels of social capital then become an established attribute of the submarket and distinguish the town as a thriving community, trending upward within the larger region.

Finally, the findings of this study fits into a wider literature regarding the efficacy of geographically targeted economic development policies and programs (Neumark and Simpson, 2015; Hanson and Rohlin, 2018). However, the more specific body of literature focusing on downtown revitalization approaches in non-metropolitan communities is quite narrow as of this manuscript's submission. There is a limited amount of peer-reviewed research (see Bradbury, 2011; Van Leuven, 2021) that attempts to quantitatively evaluate the Main Street Program as a means of restoring local economic vitality. This study contributes new evidence to this small collection of scholarship, and more importantly uses home sale prices as a novel operationalization of economic vitality apart from the previously used measures of jobs and establishments. Using a wide variety of variables to capture economic vitality allows for a more complete triangulation of the overall influence of the Main Street Program (and other downtown revitalization approaches) on the local economy.

6.2 Conclusion

As rural communities continue to grapple with the challenges posed by undifferentiated, automobile-oriented retail environments, their historic business districts will remain unwelcoming and underutilized unless local stakeholders are willing to invest their time and resources in a concerted effort to revitalize downtown. 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. Whereas homes located further away from the traditional town center typically sell for a higher price, the opposite is true in communities with an active MSP.

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 living—where local 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.

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. (2002). Evaluating the Impacts of Local Economic Development Policies on Local Economic Outcomes: What has been done and what is doable? *Upjohn Institute Staff Working Paper*, 03(89).

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.

Boehlke, D. (2012). Preserving Healthy Neighborhoods: Market-Based Strategies for Housing and Neighborhood Revitalization. In *Rebuilding America's Legacy Cities: New Directions for the Industrial Heartland*, pages 143–165. Brookings Institution Press.

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

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.

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.

Dono, A. L. and Glisson, L. S. (2009). Revitalizing main street: a practitioner's guide to comprehensive commercial district revitalization. *Washington, DC: Main Street, National Trust for Historic Preservation/National Trust Main Street Center*.

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.

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.

Glaeser, E. L., Kolko, J., and Saiz, A. (2001). Consumer city. *Journal of Economic Geography*, 1(1):27–50.

Gratz, R. B. and Mintz, N. (2000). *Cities back from the edge: New life for downtown*. John Wiley & Sons.

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.

Hanson, A. and Rohlin, S. (2018). A toolkit for evaluating spatially targeted urban redevelopment incentives: Methods, lessons, and best practices. *Journal of Urban Affairs*, pages 1–22.

Heath, T. (2001). Revitalizing cities: Attitudes toward city-center living in the United Kingdom. *Journal of Planning Education and Research*, 20(4):464–475. Publisher: Sage Publications Sage CA: Thousand Oaks, 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.

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.

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.

Lee, J. H. and Tan, T. H. (2019). Neighborhood walkability or third places? Determinants of social support and loneliness among older adults. *Journal of Planning Education and Research*, page 0739456X19870295. Publisher: SAGE Publications Sage CA: Los Angeles, CA.

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.

Leinberger, C. B. and Alfonzo, M. (2012). *Walk this way: The economic promise of walkable places in metropolitan Washington, DC*. Brookings Institution Washington, DC.

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.

Lipsman, M., Siegelman, H., and Davila, N. (2014). Iowa Upper Story Housing Feasibility Study. *Iowa Economic Development Authority Report*.

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

Loescher, D. (2009). How the Main Street Approach Works. In *Revitalizing Main Street: A practitioner's guide to commercial district revitalization*, pages 11–13. National Trust for Historic Preservation.

McGahey, R. M. and Vey, J. S. (2008). *Retooling for Growth*. Brookings Institution Press, Washington DC.

Mitchell, J. (2001). Business improvement districts and the "new" revitalization of downtown. *Economic Development Quarterly*, 15(2):115–123.

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

National Main Street Center (2018). The Approach. https://www.mainstreet.org/mainstreetamerica/theapproach.

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.

of Historic Places, N. R. (1990). How to Apply the National Register Criteria for Evaluation. *US Department of the Interior, National Park Service, Cultural Resources*.

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

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. (1993a). 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. (1993b). Pedestrians and the American downtown. *The Town Planning Review*, pages 273–286. Publisher: JSTOR.

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. (1997). Downtown retail revitalization: a review of American development strategies. *Planning Perspectives*, 12(4):383–401.

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.

Rosen, S. (1974). Hedonic prices and implicit markets: product differentiation in pure competition. *Journal of political economy*, 82(1):34–55.

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.

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.

Sirmans, S., Macpherson, D., and Zietz, E. (2005). The composition of hedonic pricing models. *Journal of real estate literature*, 13(1):1–44. Publisher: Taylor & Francis.

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. 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). Leveraging Main Street as a Real Estate Amenity: Retail Corridor Revitalization and Residential Property Values. *Forthcoming*.

Wells, J. C. (2016). The Main Street Approach to Community Design. In Melcher, K., Stiefel, B., and Faurest, K., editors, *Community-built: Art, Construction, Preservation, and Place*, volume 7, page 172. Taylor & Francis.

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.

Appendix A: Main Street Transformation Strategies

Table 5: MSP Transformation Strategies, as described by the National Main Street Center

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 4: Graphic from NMSC Website: Main Street Transformation Strategies

Appendix B: Downtown District Geocoding Process

Figure 5: Reedsburg, WI with geocoded downtown line-string (top, highlighted) & without (bottom)