Value of Transit as Reflected in U.S. Single-Family Home Premiums

A Meta-Analysis

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Although transit accessibility premiums have been rigorously studied at the local and regional levels for more than 40 years, drawing conclusions about premiums on a national scale requires a meta-analysis. Estimating effect size is a primary purpose of a meta-analysis. Effect size was calculated in 2007 by using pre-2003 studies but has not been studied since. This study sought to fill gaps in the literature by conducting a regression analysis and a thorough meta-analysis that reviewed 114 studies published from 1976 to 2014. Of 114 U.S. and Canadian single-family studies, a sample of 45 single-family studies was selected for further analysis. Compared with the previous meta-analysis, the current analysis found that, overall, U.S. and Canadian studies reported lower premiums on average for single-family houses. The average single-family home premium of 2.3% was significantly lower than the 4.2% premium calculated by the previous meta-analysis. It was found that reported transit premiums were decreasing over time as more variables, such as walkability of station areas, were statistically controlled. It was also found that compact regions with greater accessibility via transit produced higher transit premiums and transit premiums were neutral with respect to technology (light versus heavy rail) once regional compactness was controlled for. These findings suggest that to get the most out of transit investments, planners and public officials must make an effort to create compact regional development patterns and that single-family housing may not be the best use in areas close to transit.

The economic impact of transit is a subject that has been heavily researched since the early 1970s. More than 200 studies have been published regarding real estate premiums near transit stations. The construction of transit lines changes the landscape of accessibility, which triggers a sorting process whereby those who value transit seek to move closer to it. If there is pent-up demand for transit (and the majority of U.S. studies suggest that there is), this demand results in increases in price for places near transit relative to places farther away. How much more will these consumers pay for real estate near transit stations compared with similar properties without the transit option?

Overall, the studies show that proximity to transit increases property values almost universally. The highest premiums are for multifamily, commercial, and vacant properties, yet the majority of studies are about single-family properties. Regional differences make direct comparisons of different transit systems tricky, and results vary widely across studies. To draw conclusions about premiums on a national scale requires a meta-analysis.

Meta-analyses use individual studies as data points that are then combined into weighted averages or used in regression analyses. The latter allow estimation of most likely real estate premiums once various differences across the studies have been controlled for. Differences in county appraiser databases, regional economies, and real estate laws, including property transfers, taxes, and zoning, complicate the task of combining results of distant transit systems into overall measures of effect size.

Only two recent meta-analyses are available for transit accessibility premiums. One did not calculate weighted average effect sizes, which is a primary purpose of a meta-analysis (*1*). The most recent meta-analysis with national premiums uses a database of 57 single-family and commercial studies published before 2003 (*2*). The study produced two models but did not supply effect sizes for individual studies, a major drawback. More than 80 studies have been produced since 2003, 40% of the total number of studies since the 1960s. Since 2003, studies have introduced the use of much larger databases, with walkability control variables, advanced spatial methodologies, and case studies of smaller, western cities with limited transit accessibility. More research is needed to determine if these or other factors affect the national averages.

Since the last major meta-analysis that calculated a transit premium, both data and methodology for transit premium studies have improved. Although earlier models commonly measured one premium for an entire transit system, later studies used more sophisticated control variables. In addition, spatial econometrics and hierarchical linear modeling methods introduced to the literature after 2002 further illuminate how neighborhood and street-level amenities affect values. The inclusion of these additional control variables may reduce the accessibility effect size as measured in transit premium studies.

New studies report premiums for new transit systems: more than 15 rail and trolley systems have opened or expanded since 2002 in the United States and Canada. Many of these new systems have been built in auto-oriented cities like Dallas, Texas; Denver, Colorado; Houston, Texas; Phoenix, Arizona; Sacramento, California; and Seattle, Washington. In contrast, the majority of the earliest premium studies were primarily conducted in larger and older metropolitan areas, notably New York; Philadelphia, Pennsylvania; San Francisco and Oakland, California; and Washington, D.C. Little is known about the differences in premiums between large and small cities, new and old cities, and auto-oriented and more transit-oriented cities.

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This study seeks to fill this gap by furnishing a meta-analysis of the values of single-family homes at transit stations, summarizing 40 years of research. All studies of single-family home premiums with respect to transit in the United States and Canada before 2014 are covered and 114 studies are reviewed, the largest sample, to the authors' knowledge, for a meta-analysis of accessibility premiums to date. The hypotheses are (*a*) proximity to transit continues to command premiums in the real estate market because of the accessibility that transit provides to regional destinations; (*b*) compact regions with greater accessibility via transit produce higher transit premiums; (*c*) transit premiums are neutral with respect to technology (light rail versus heavy rail) once regional compactness is controlled for; and (*d*) reported transit premiums are decreasing over time as more variables such as walkability of station areas are statistically controlled.

After a brief overview of the theory behind transit accessibility premiums, a literature review is concluded with an explanation of how meta-analysis is used to summarize the results of incongruent study methodologies into one average effect size. Then national averages are computed with the accessibility premium studies as data. Regression analysis and average weighted premiums are the statistical methods used.

THEORY OF ACCESSIBILITY PREMIUMS

The old adage about real estate being about location, location, location is really a statement about the role that accessibility plays in the development potential of property and hence its value. Any discussion about the urban economic influence of accessibility invariably starts with the work of von Thünen, who in 1863 theorized about the value of farmland as a function of the land's relative proximity and thus its accessibility to the marketplace. The closer (and more accessible) the land is, the higher the value. Assuming equal levels of soil productivity, as values rise farmers are induced to plant crops that yield higher returns per unit of land. Thus, accessibility to the marketplace influences not only the relative price of land but also the intensity with which the land is used. Later work translated von Thünen's work beyond the farmland context to other types of land use and showed similar relationships between accessibility, property value, and development intensity (*3*). As land becomes more accessible, its perceived usefulness as a location for business or residential activity increases, leading to increased demand for the land, which raises its value and induces the ultimate land developer or user to use the land more intensely (*4*).

The introduction of transit service to an area increases accessibility to the rest of the region and can reduce travel times to the central business district and other activity centers, particularly if the service operates in its own right-of-way (*5*). This improvement has the net effect of increasing the relative accessibility of that area compared with other areas at the same distance from the central business district and activity centers but without transit (*6*). In theory, the increase in relative accessibility translates into increased development potential and land values (*7*).

New transit options reduce the cost of travel and transportation, and the savings are capitalized in the value of neighboring real estate. Transit premium studies calculate the value that buyers place on convenient access to the transit option, commonly referred to as the "accessibility premium" (*8*). The accessibility premium is the total net present value of the time or money that buyers can save over time by using the new transit option. Net present value takes the stream of savings and adjusts them for inflation before adding them together to calculate the premium. Hedonic price studies compare the values of properties with and without transit access to see whether buyers valued the transit option and paid more for property near stations (*9*).

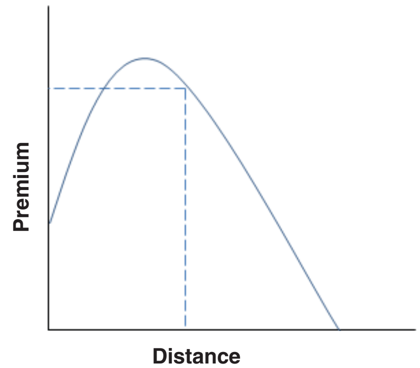

FIGURE 1 Single-family accessibility premium distance decay as a quadratic function.

Improvements in transportation induce complementary zoning changes, which create transit-oriented developments in station areas. Transit-oriented development is defined as "compact, mixed-use development near transit facilities with high-quality walking environments" (*10,* p. 11). Increased density of jobs and housing creates rising local demand for transportation services, and municipalities then consider further transportation improvements. A common assumption is that land values decrease in a linear fashion with distance from a station, which appears to be true for commercial and multifamily properties (*11, 12*).

The literature on the single-family home premium, however, commonly indicates a quadratic function, with homes very close to station areas selling at a discount because of the nuisance effect of higher crime, noise, and congestion. Premiums recover from this nuisance effect at a certain distance from the station area and then decline as accessibility declines with distance from the station (Figure 1). Unlike single-family home properties, land uses more compatible with busy station areas are unlikely to suffer from the nuisance effect of the station area. Because commercial and multifamily properties benefit from very close proximity to station areas, the added accessibility overcomes the nuisance effect at all distances (*13–15*). Hedonic price studies may evaluate distance as a continuous variable, but others show different values for different distance bands around stations. [A discussion of methodology differences may be found elsewhere (*7, 15, 16*).] Station parking lots, in particular, are associated with negative premiums. Park-and-ride facilities almost uniformly reduce the value of properties near stations, possibly below the new transit option's accessibility premium (*17–19*).

METHODS

Sample

Previous meta-analysis studies show that premiums will differ for each major real estate type (*1, 2*), so the focus here is on the most common real estate type, the single-family residence, even though transit premiums are likely to be smaller for this real estate type than for more intensive land uses. First a thorough search was made for studies quantifying the effect of transit station areas on real estate; Academic Search Premier, Google, Google Scholar, PAIS International, Scopus, TRIS Online, Web of Science, and ISI Web of Knowledge databases were used with the keyword "transit" coupled with the keywords "oriented development," "real estate," "residential," "single-family," "home values," and "land values." The bibliographies of previous literature reviews were also examined (*20–27*), as well as the Transportation Research Board's Annual Meeting programs, and leading researchers were contacted. The search yielded 114 North American studies from 1976 to 2014 that relate the price of single-family housing to proximity to transit.

Of the 114 studies reviewed, a sample of 45 single-family studies was selected based on the following criteria:

1. Only studies for which data were available for computing effect sizes were selected.
2. Studies outside of North America were excluded to focus on relatively homogenous economic and political environments (*28–34*). Differences in development history and culture significantly influence the impact of development on real estate values, and the underlying study controls were relied on to account for regional differences.
3. Studies that use aggregated data, in which census tract or some other neighborhood average home value is used instead of individual home values, were excluded. Several earlier studies (*35, 36*) and recent studies (*37, 38*) were found that used aggregated data. Such studies have limited variance in both dependent and independent variables with which to explain relationships. More important, it is inappropriate to make causal and associative inferences about individuals based on results obtained from aggregate data, an error called the "ecological fallacy."
4. Since the intent was to measure the value of accessibility, the studies measuring only the speculative market premiums accruing before service began were dropped. All studies from the time before the opening of a transit line, including the announcement phase [for example, the study by Gatzlaff and Smith (*39*)] and the construction phase [for example, studies by Damm et al. (*40*) and by Ferguson et al. (*41*)] were excluded from the sample. However, the longitudinal studies that focus on changes of premiums before and after the opening of a transit station were included (*42–47*). The researchers were relied on to select an appropriate time frame to measure premiums, noting that the true effect may well extend beyond the boundaries of some or most studies.

In sum, 45 single-family studies from 1976 to 2014 were selected for further analysis. These studies have several things in common. All apply statistical tests to determine the significance of the various effects, although they use different statistical methods to quantify these effects, and almost all are based on sizeable samples.

Proximity to Stations

In the studies reviewed, distance from the transit station was mostly reported as a range from one to several distance bands (buffer widths) around the station. The band widths were, in most cases, unique to each study. The studies with 30 radial distance bands commonly reported multiple premium measures; that number gave a total of 83 premium observations. The bands account for the quadratic nature of single-family home premiums. The weighted average midpoint of each band width was calculated and used as the measure of average distance to the transit station and it was called the "calculated distance." For example, the weighted average distance for the band of 0.25 to 0.5 mi is more than 0.46, nearly 0.5, because so much of the total area of the band is concentrated within its outer boundary. The unique band widths from the individual studies were grouped into six categories—0 to 0.25 mi, 0.25 to 0.5 mi, 0 to 0.5 mi, 0.5 to 1 mi, 1 to 2 mi, and 2 to 3 mi—and the weighted average premium was computed for each band.

Of the 114 studies reviewed, 19 reported gradients instead of radial distance bands. The premium is measured as a percentage or dollar amount for each unit of distance from the station area. Occasionally, more than one distance gradient was given, but frequently only one average gradient was reported. Because in those cases there was no way to calculate the average distance from the station or to account for nuisance discounts very close to station areas, these studies were removed. Instead, a separate, average premium was calculated for each increment of 100 ft from the station area for comparison. The gradient reveals that overall, single-family home values decrease with distance from the station, even in the immediate vicinity of stations.

Effect Sizes

To combine results from different studies, a meta-analysis requires a common measure of effect size. The common metric used here is the elasticity of single-family housing premiums with respect to transit. Elasticity is the percentage change in one variable associated with a 1 percentage point change in another variable (the point elasticity is the ratio when these changes are infinitely small). Elasticities are dimensionless (unit-free) measures of the association between pairs of variables and are the most widely used measures of effect size in economic and planning research.

Elasticities were obtained from the individual studies in the sample in one of two ways: either they were copied from published studies in which they were reported explicitly or they were calculated from regression coefficients and the mean values of dependent and independent variables.

When the regression coefficients were not significant, it could have been decided to drop the observations or substitute zero values for the elasticities, since the coefficients were not statistically different from zero, but instead it was decided to use the reported coefficients to compute elasticities. Dropping the observations would have biased the average elasticities away from the null hypothesis of zero elasticity, and thus this option was rejected. Substituting zero values for computed elasticities would have had the opposite effect—biasing average values toward the null hypothesis—thus it was rejected as well. Instead, the best available estimates of the central tendency in all cases, the regression coefficients themselves, were used to compute elasticities. This approach is the standard in meta-analysis [e.g., Melo et al. (*48*)].

RESULTS

Weighted Average Premiums

Individual elasticities from primary studies were used to compute weighted average elasticities. Most of the studies reported the transit premium for more than one buffer (for example, 0 to 0.25 mi, 0.25 to 0.5 mi). Each of these buffers was included as an observation in this analysis.

Studies were weighted by the number of observations, both test and control. Since sample sizes are nearly always known, weighting

TABLE 1 Weighted Average Premiums of Single-Family Housing Units with Respect to Transit

Distance Category (mi)	Weighted Average Premium (%)	Number of Studies
0–0.25	5.40	35
0.25–0.5	5.86	12
0–0.5	1.30	20
0.5–1	3.81	6
1–2	1.59	6
2–3	–0.67	2
Total	2.88	81

by sample size is by far the most common approach in meta-analyses (*49,* p. 264). Weighting by standard error is preferred, to give the greatest weight to the most precise estimates (*50–54*). Sample size was used as a weighting factor because consistent standard error estimates from individual studies were not available. Without standard error data, meta-analyses using sample size as a weighting factor, including the current one, cannot report statistical confidence for results.

The resulting weighted average elasticities are shown in Table 1. As expected, the premiums approximate a quadratic equation line: premiums very near station areas are negative and grow quickly with distance from the station area; they peak around a mile from the transit station and then fall off. Bands of 0 to 2 mi and 3 to 4 mi are represented by one study with a limited number of observations and cannot be considered a national average, so results for these bands are not reported; however, these studies are included in the total weighted average premium.

Figure 2 presents the decay of the single-family accessibility premium distance based on average premiums of each band. The total weighted average premium is 2.88%; this finding means that in the United States and Canada, studies published from 1970 to 2013 show, on average, a small decrease in value for single-family homes with distance from stations. As shown in Table 1 and Figure 2 (red dot), an average premium of 1.3% was found for the 0- to 0.5-mi buffers; this finding is lower than one would have expected. The reason is conflicting premiums reported by individual studies for this buffer size. Studies that did not distinguish between a quarter-mile and a half-mile distance from transit but combined them as one buffer (0 to 0.5 mi) reported mixed premiums, with both positive and negative signs, for single-family housing in this band. This finding leads to a lower average premium than one would have expected since the negative and positive premiums, to some degree, cancel each other out.

An average premium was also computed for the 19 studies that reported premiums based on the distance gradient from transit. A few of these studies measured gradients for various distance bands, but there were too few to report any kind of national average. So the individual studies were weighted on the basis of their sample size and all these reported figures were combined into one premium per 100 ft from transit. It was found that overall the price of a single-family housing unit decreases by 0.17% for every 100 ft from the station. This result is in conflict with the distance band meta-analysis, which shows relatively small premiums very near station areas, with larger premiums from 0.25 to 1 mi from the station.

Regression Analysis

To predict the effects of proximity to transit stations on single-family home values, linear regression models were estimated by using individual studies in the sample as the data points. From individual studies, variables were derived such as study site, modeling methodology used, categories of control variables used, sample size, nature of data (longitudinal or cross-sectional), type of transit, station catchment area size, year of the study, population size, and the degree of auto orientation at the regional level. The dependent and independent variables used in the linear regression are shown in Table 2. As shown, two distance variables are used: the calculated average distance from the station area, described earlier, and the square of the calculated average distance. A quadratic curve results when the two variables are added together.

Dummy variables were used to indicate whether the studies were for bus rapid transit (BRT), heavy rail transit (HRT), or light rail transit (LRT). The referent was commuter rail transit. Dummy variables were also used to indicate the methodology used to measure

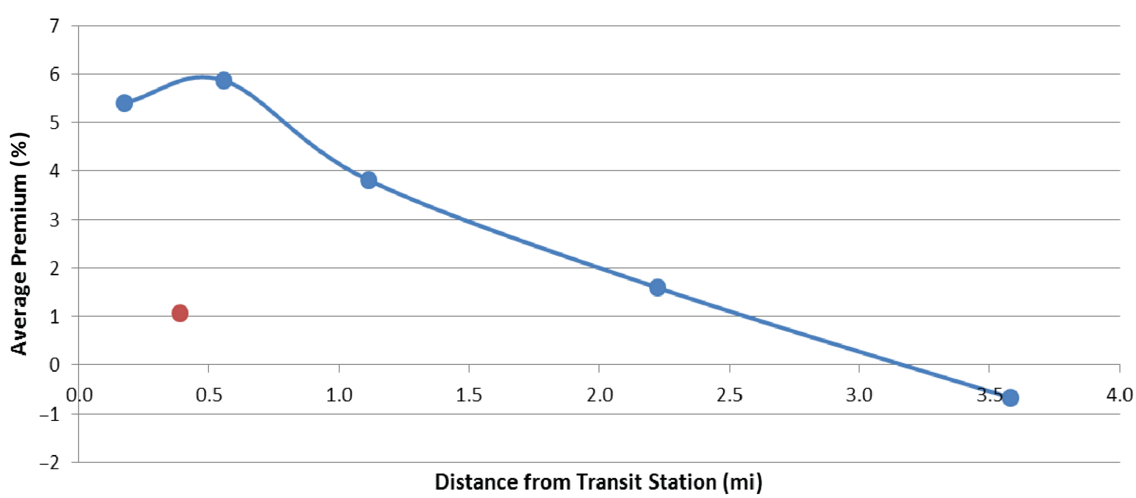

FIGURE 2 Single-family accessibility premium distance decay based on average premiums of each band.

TABLE 2 Variables Employed in Regression Model

Variable	Definition
Dependent variable	
prempct	Premium percentage
Independent variables	
dist	Calculated average distance from station area
distsq	Calculated average distance from station area, squared
BRT[a]	Dummy variable for bus rail transit
HRT[a]	Dummy variable for heavy rail transit
LRT[a]	Dummy variable for light rail transit
hedonic[b]	Dummy variable for hedonic price modeling
Rptsale[b]	Dummy variable for repeat sales modeling
Long[c]	Dummy variable for longitudinal analysis
year	Dummy variable indicating year of study (1 = after 2002; 0 = 2002 or before)
lnmetpop	Natural logarithm of metropolitan population at closest census to study year
lnmetcom	Natural logarithm of the measure of metropolitan compactness developed by Ewing and Hamidi (*55*); higher values of the index correspond to more compact development, lower values to more sprawling development

[a]Commuter rail transit is the reference dummy for the transit type variable.
[b]Matched pair comparison is the reference dummy for the methodology variable.
[c]Cross-sectional analysis is the reference dummy for the nature of the data variable.

TABLE 3 Relationships of Proximity to Transit and Regional Variables to Single-Family Premiums

Variable	Coefficient	Standard Error	*t*-Statistic	*p*-Value
Constant	−0.336	0.527	−0.638	.526
dist	0.190	0.029	6.509	<.001
distsq	−0.039	0.007	−5.280	<.001
hedonic	−0.046	0.060	−0.774	.442
LRT	0.001	0.054	−0.009	.993
BRT	−0.089	0.073	−1.220	.227
year	−0.092	0.050	−1.843	.070
lnmetpop	−0.010	0.025	−0.394	.695
lnmetcom	0.104	0.061	1.716	.091

NOTE: $R^2 = .512$.

the premiums. Some studies used hedonic modeling, or regression analysis, for premium measurement. Other studies used matched pair comparisons; a database matching similar properties was created to calculate price premiums. Still other studies used repeat-sale databases to eliminate the need for matched pair comparison: two or more sales of the exact same property were used to calculate price premiums.

The current analysis accounts for both the station-level variables and the regional differences among studies. Population size was controlled for through the closest census and also for auto orientation of the regions by using the Ewing and Hamidi compactness index (*55*). This index places urban sprawl at one end of a continuous scale and compact development at the other. The original index, developed in 2002 (*56*), was updated to 2010 (*55*). The updated index incorporates more measures of the built environment than the original index did and captures four distinct dimensions of sprawl: development density, land use mix, population and employment centering, and street connectivity. The index captures the relative accessibility provided by the metropolitan area. This updated index is available for 221 metropolitan areas. The updated index was used as the measure of auto orientation in this study.

Results of the regression analysis are presented in Table 3. Control variables mostly have the expected signs and often are significant. For single-family units, LRT and BRT stations have lower premiums than heavy rail and commuter rail stations, although this result is not significant after regional compactness is controlled for. This finding agrees with findings by Cervero and Duncan (*12*), who explained the lower premiums for LRT and BRT in terms of lower speed and quality of service compared with heavy rail and commuter rail, as well as greater nuisance effects of noise and congestion with LRT and BRT compared with heavy rail and commuter rail transit (*12*).

The methodology used in transit premium studies was also controlled for. It was found that studies using hedonic price modeling reported lower premiums than studies using the other two methods, matched pair comparison and repeat-sale modeling. The authors cannot think of any good explanation for why using different methodologies led to a significant difference in single-family premiums.

Another significant variable is the year the study is conducted. The more recent studies report significantly lower premiums than earlier studies. This finding can be due to the inclusion of additional control variables (e.g., walkability) at the neighborhood level in these studies. Studies since 2002 regularly measure the impact of complete streets, higher densities, and greater walkability. Traffic volumes and street amenities, sometimes at the parcel level, are used to draw conclusions about the quality of neighborhoods served by transit.

The two independent variables of the greatest interest are distance to the transit station and distance to the transit station squared. These variables have statistically significant relationships to housing premiums. The housing premium decreases with distance from a transit station and increases with distance squared (in a quadratic formulation). This finding confirms the quadratic nature of the single-family housing premium with respect to transit and agrees with earlier findings from the average weighted premium analysis (Figure 2).

Interestingly, controlling for regional compactness causes the LRT and BRT dummy variables to no longer be significant. According to Ewing, the main characteristic of urban sprawl is poor accessibility (*57*). In a low-density, single-use development, everything is far apart because of large private land holdings and segregation of land uses. Residents and service providers in these areas must pass vacant land on their way from one developed use to another. Poor accessibility between land uses may leave residents with no alternative to miles and miles of automobile travel, even though the public transit system is available. The current results indicate that transit premiums of single-family housing are neutral with respect to technology (light versus heavy rail) once regional compactness is controlled for.

CONCLUSIONS

Compared with the most recent meta-analysis with premiums and recent literature reviews, it was found that overall, U.S. and Canadian studies report, on average, lower premiums than earlier studies do. The weighted average premium in this study is 2.3% using distance bands or 0.168% for every 100 ft of distance closer to the transit station in gradient studies. These results are supported by the regression model.

Before regional compactness is controlled for, the higher premiums for commuter and heavy rail transit found in the regression analysis appear reasonable. Commuter and heavy rail transit systems may be part of a more developed transit system network; these systems deliver greater connectivity, mobility, and, most important, accessibility. Some light rail systems, especially those in western cities, may offer accessibility to a limited number of regional destinations. As these systems grow, so will the transportation accessibility value and the associated real estate premiums. After regional compactness is controlled for, the specific mode of transit proves to be no longer significant. But regional compactness enters the regression with a marginally significant coefficient.

The average single-family home premium of 2.3%, with distance not controlled for, is significantly lower than the 4.2% premium calculated by Debrezion et al. (*2*). This finding may be due to the inclusion of newer studies in this study's sample. More recent studies have been focusing on newer systems and the newer systems tend to be limited in terms of accessibility benefits; the accessibility provided by transit is that which affects real estate values. It may also be that newer studies control for more effects that may have confounded the relationship between transit station proximity and home values in earlier studies. Premiums once attributed to the new transit option may now be attributed to neighborhood amenities like street and sidewalk design.

This study has its limitations. The study was weighted by the number of observations. As noted earlier, it would have been better to weight by standard error. Standard error should be the preferred meta-analysis weight because it makes it possible to give greater weight to the more precise surveys. This method simply was not feasible, since standard errors were rarely reported in the sample studies. Also, some regional differences were not controlled for. It was not feasible to create a dummy for each region because of the limited sample size and issues regarding the degrees of freedom in the current regression analysis. Also every study that met the criteria was included, regardless of the number of times a region was represented, so it is possible that some regions were given more weight than others. A significant number of studies in the sample would have been lost if the analysis was limited to only one study for each region. Finally, some of the buffers are larger than others and the presence of a negative premium—for example, for the 2- to 3-mi buffer—may be due to a redistribution of property values within this large buffer. Since the data points come from the data reported in individual studies, the authors had no control over the size of the buffer distance.

Obviously, these conclusions are limited by the sample of single-family housing premiums. It is recommended that meta-analyses similar to this one be conducted for other property types, specifically multifamily, commercial, and vacant land. It has been almost a decade since the meta-analysis of commercial properties by Debrezion et al. (*2*), and that meta-analysis only included literature through 2003. The burgeoning field of transit premium studies deserves an update.

The current findings combined with earlier meta-analyses suggest that single-family housing may not be the best residential use in areas very close to transit. Possibly, increasing zoning entitlements for these properties will increase values by giving homeowners the options of selling their property for more money or converting their properties to more compatible uses. Current zoning and building codes make these types of property conversions difficult or impossible to accomplish legally in most locations. More study is needed to identify national trends that maximize the use and value of buildings in areas very close to transit.

This study could benefit transit agencies, local governments, and other transit advocates in two ways. One use is to advocate for transit investments in their region by asserting that even property owners and renters who will not use transit still value transit access. Market prices reflect the value that society places on different property attributes, as reflected in hedonic price analyses.

The term "compact" is used here as by Ewing and Hamidi (*55*), meaning provision of high regional accessibility. Compactness is measured in terms of development density, land use mix, street connectivity, and activity centering (*55*). Some of the specific steps that can be taken are discussed next.

Change Rules of Development

Some of the biggest impacts on urban form can be achieved through changes to local land development policies. Many communities have not overhauled their zoning and subdivision ordinances since they were created in the 1950s or 1960s, when they were designed to separate land uses, maintain low densities and large setbacks, ensure plentiful parking, keep streets wide, and save money by limiting sidewalks. Communities need to examine their development rules to determine if and how these rules could be changed. It is suggested that they include in their review the following items:

- Zoning codes,
- Subdivision regulations,
- Street design standards,
- Parking standards,
- Annexation rules, and
- Design guidelines.

Favor Smart Growth Projects in Approval Process

Once communities have reformed their codes to allow smart growth, they could make it easier for such projects to gain approval. Predictability in the approval process is valuable to everyone concerned, including local government, citizens, and developers, for whom time is money. Laying out the guidelines and rules for what local government considers good development makes the process more predictable and fair, as does defining the benefits that developers will get from meeting or exceeding a community's standards.

One way to favor good projects is to provide incentives. If development projects meet or exceed a community's targets, developers could be rewarded with, for example, density bonuses that allow them to build more or permitting fee waivers that allow them to pay less. However, it could also be argued that because developers benefit from transit infrastructural investment in their neighborhood, they could be persuaded to make a financial contribution to expedite the project or provide public utilities at or near the transit node. Alternatively, local governments could calculate the traffic reduction benefits of compact development and accordingly reduce the amount of exactions or fees that developers need to pay.

Another way to favor good development is to offer streamlined permitting for projects that meet specified community targets. Of course, the process still must include opportunities for meaningful public input and ensure compliance with public safety and environmental safeguards. Nevertheless, because less time spent negotiating approval processes can translate into significant cost savings for developers, the promise of faster permitting can be an effective incentive for smart growth. Orlando, Florida, has provided all of these incentives for traditional urban development in the city's southeast sector.

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