

Selling Smart Growth

*Communicating the Direct Benefits of More Accessible, Multi-Modal
Locations to Households, Businesses and Governments*
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By
Todd Litman
Victoria Transport Policy Institute



Smart Growth refers to compact, multi-modal development. This can provide many benefits to residents, businesses and governments. We can do better at communicating these benefits.

Summary

Households often face trade-offs between housing and transportation costs: they can choose a cheaper house at the urban fringe where transportation is expensive, or pay more for a home in a more accessible and multi-modal, “Smart Growth” neighborhood where transport is cheaper. Urban fringe homes generally offer more space per dollar, and so appear to be better investments, but there are other economic factors to consider. By shifting household spending from transport to real estate, Smart Growth tends to increase household wealth, and by providing more affordable transport options it increases economic resilience. It increases mobility options for non-drivers, which increases their economic opportunities and reduces drivers’ chauffeuring burdens. Smart Growth reduces residents’ traffic risks, and improves their fitness and health. Smart Growth also increases real estate industry profits, local economic development and property tax revenues. This report examines these factors and describes how to communicate them to consumers, real estate professionals and policy makers.

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Introduction

When choosing home locations, households often make trade-offs between housing and transportation costs: urban fringe areas have cheaper housing but more expensive transport, and urban neighborhoods have cheaper transport and more expansive housing. Although there is growing discussion of the relative merits of urban and suburban home locations, they often overlook significant household benefits of choosing more compact, multi-modal residential locations.

For convenience sake this report often uses the terms *sprawl* for dispersed, urban fringe, automobile-dependent areas, and *Smart Growth* (also called *Location Efficiency* or *Location Affordability* and *Transit-Oriented Development*) for more compact, accessible and multi-modal neighborhoods. Table 1 contrasts these two development patterns. Sprawl refers to areas where automobiles are essential, while Smart Growth refers to areas where automobiles are optional, to typical households.

Table 1 Comparing Smart Growth and Sprawl (SGN 2011; Litman 2013)

	Sprawl	Smart Growth
Growth pattern	Urban fringe (greenfield) development	Infill (brownfield) development.
Density	Lower-density, dispersed activities	Higher-density, clustered activities
Land use mix	Homogeneous (housing, services and businesses are geographically separated)	Mixed uses (housing, services and businesses are located close together)
Scale	Large scale. Large blocks and wide roads. Less detail, since people experience the landscape at a distance, as motorists.	Human scale. Smaller blocks and roads. More detail, since people experience the landscape up close, as pedestrians.
Transport	Automobile-oriented. Poorly suited for walking, cycling and transit.	Multi-modal. Supports walking, cycling and public transit as well as automobiles.
Roadway design	Roads are less connected and designed to maximize vehicle traffic volume and speed	Roads are well connected and designed to accommodate various users and activities
Planning process	Unplanned, with little coordination between jurisdictions and stakeholders.	Planned and coordinated between jurisdictions and stakeholders.

This table compares sprawl and Smart Growth. Put simply, sprawl is where automobile ownership is essential and Smart Growth is where it is optional for most households.

There is considerable research on sprawl costs and Smart Growth benefits (Burchell, et al. 2005; Ewing and Hamidi 2014; Litman 2014), much of which is technical and focuses on public and environmental impacts. There is less information oriented to help consumers, businesses and local officials understand the direct benefits they can gain from more compact and accessible home locations, and how to design programs to achieve these benefits (Griesenbeck 2023). This report can help fill that gap.

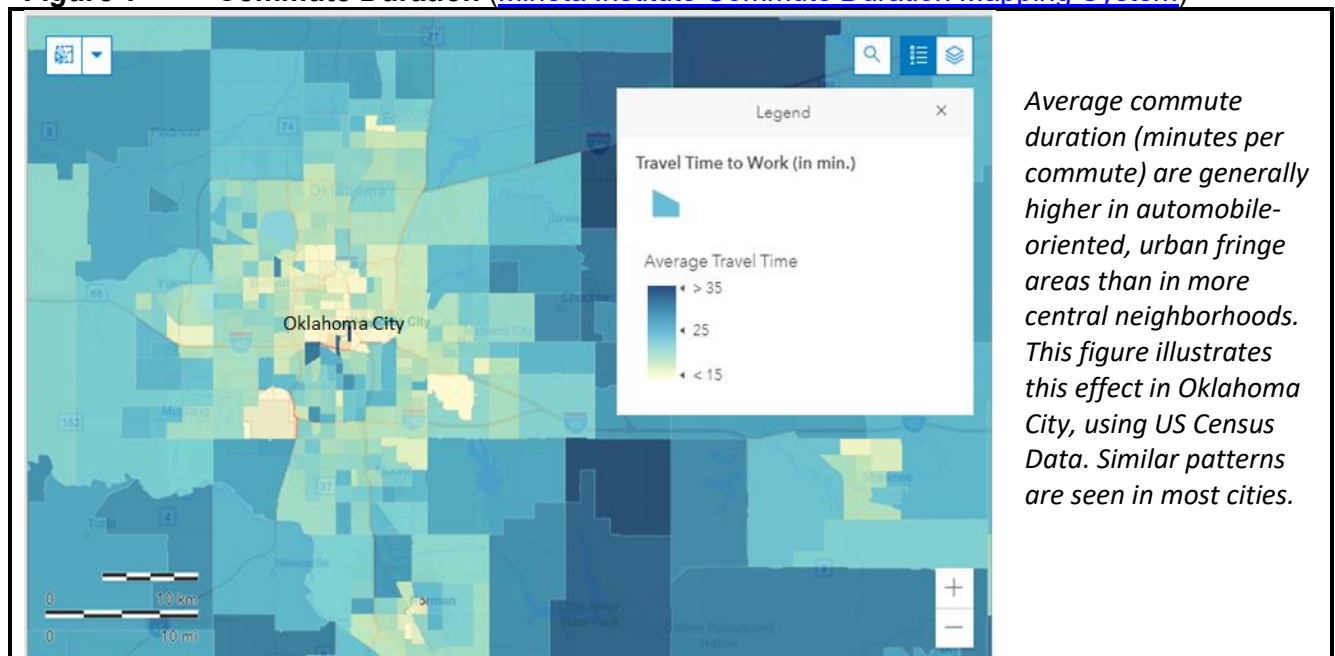
This is a timely issue. Surveys indicate that a growing portion of consumers value urban features such as accessibility and multi-modalism, but face various obstacles that discourage them from choosing Smart Growth locations, including myths about the dangers of urban living, and policies that favor sprawl over urban housing. Providing more information about Smart Growth benefits can help some, possibly many, households to choose home locations that best serve their long-term needs, and leverages additional indirect benefits to businesses, local communities and the environment.

Household Benefits

Households often make trade-offs between housing and transportation costs; they can choose a cheaper house at the urban fringe, or pay more for a home in a more accessible, multi-modal urban neighborhood. Many studies have examined these trade-offs in developed (Haas, et al. 2006; Quednau 2016; ULI 2009) and developing countries (Morrison 2014; Isalou, Litman and Shahmoradi 2014), and new tools can help evaluate these trade-offs (CNT 2015; FHWA 2011).

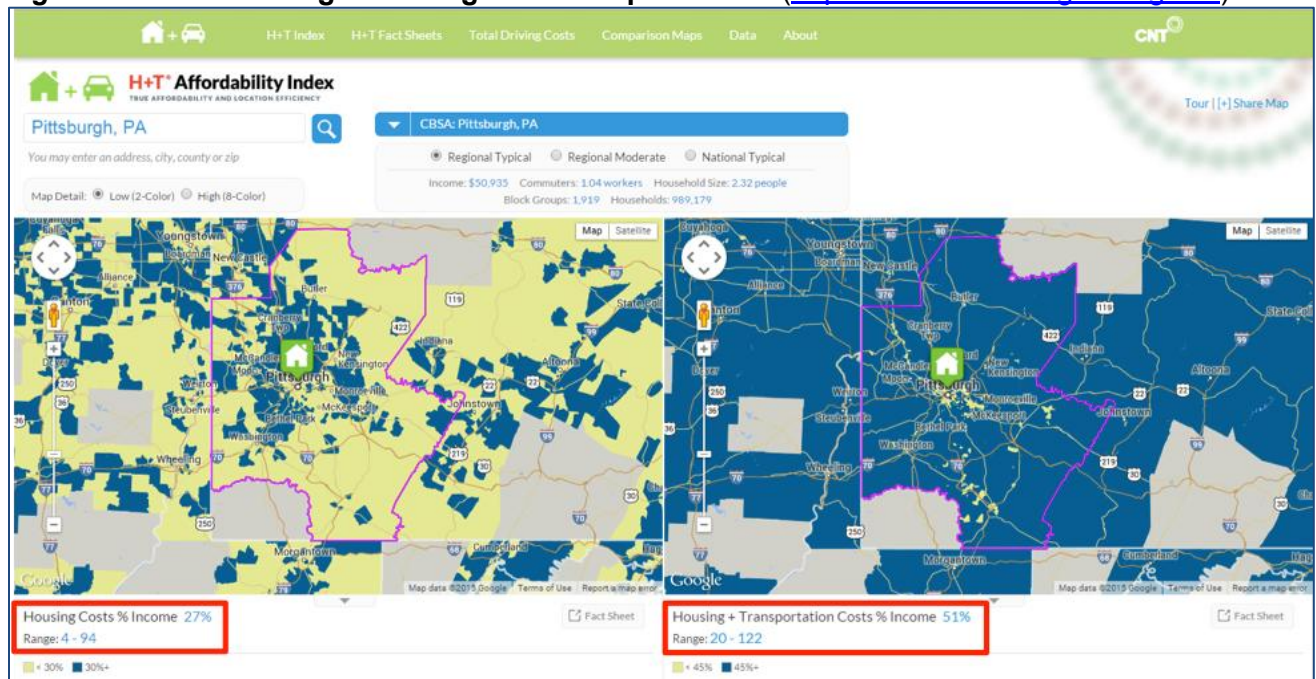
Smart Growth locations are more accessible and multimodal. They are more compact and mixed, so common destinations are closer together, and they are designed for walking, bicycling and public transit so it is easy to get around without driving. This reduces the time and money that residents must spend travelling, and is particularly beneficial for people who cannot, should not, or prefer not to drive for most travel. Figure 1 is a heatmap showing average commute duration in a typical North American urban region (Oklahoma City). It shows that residents of central neighborhoods have far shorter duration commutes than in suburban areas at the urban fringe.

Figure 1 Commute Duration ([Mineta Institute Commute Duration Mapping System](#))



Various analysis tools can quantify the transportation cost savings provided by a more accessible and multimodal location where residents can own fewer vehicles, drive less and rely more on other travel modes. For example, the [Housing and Transportation \(H+T\) Affordability Index](#) integrates housing price and transport expenditure data to provide neighborhood level information on housing and transport costs (CNT 2016). Figure 2 illustrates a typical analysis. The left image indicates the areas where housing is considered affordable (housing expenditures total less than 30% of household budgets, indicated in yellow). The right image shows the areas considered overall affordable (housing and transport expenditures together total less than 45% of household budgets, indicated in yellow). Sprawled areas tend to have more affordable housing, but urban neighborhoods tend to have the greatest overall affordability because their higher housing costs are more than offset by lower transport costs.

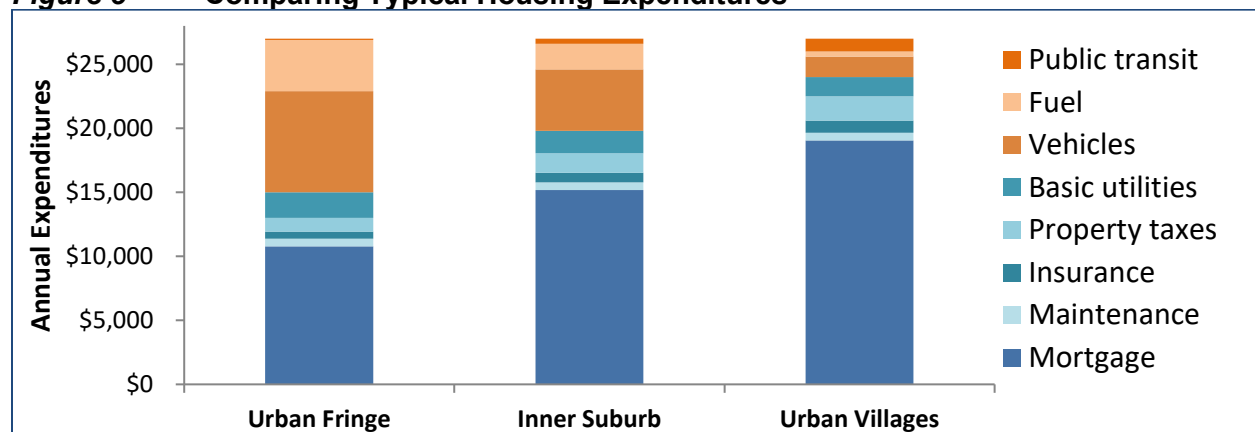
Figure 2 Pittsburgh Housing and Transport Costs (<http://htaindex.cnt.org/user-guide>)



This figure illustrates housing and transport cost trade-offs. The left image indicates that sprawled areas tend to have the most affordable housing (indicated in yellow), but the right image shows that urban neighborhoods tend to have the greatest overall affordability because their higher housing costs are more than offset by lower transport costs.

To meet basic transportation needs, sprawled areas require that most adults own a personal automobile and drive high annual miles, which typically costs \$5,000 or more annually. Inner suburbs provide better, and compact, mixed, multimodal urban villages the best accessibility overall, allowing households to reduce their vehicle ownership and use, and associated costs (Arrington and Sloop 2009; CNT 2015; Adam Millard-Ball 2015; Schneider, Handy and Shafizadeh 2014; Salon 2014).

Figure 3 Comparing Typical Housing Expenditures



A typical \$60,000-annual-income household can afford to spend \$27,000 on housing and transport combined. Smart Growth reduces transport and increases housing expenditures.

In a typical situation (Figure 3), a household can choose between an urban fringe house that requires spending 25% of income on housing and 20% on transportation (two cars); an inner suburb that requires spending 33% on housing and 12% on transport (one car); or an urban village that requires spending 40% on housing and 5% on car-free transport. Each option has the same total housing and transportation costs, so in the short-run they seem financially equal. However, vehicles depreciate rapidly and expenditures on vehicle fuel generate no equity, while investments in real estate tend to appreciate in value, particularly in growing urban areas, for reasons summarized in the box below.

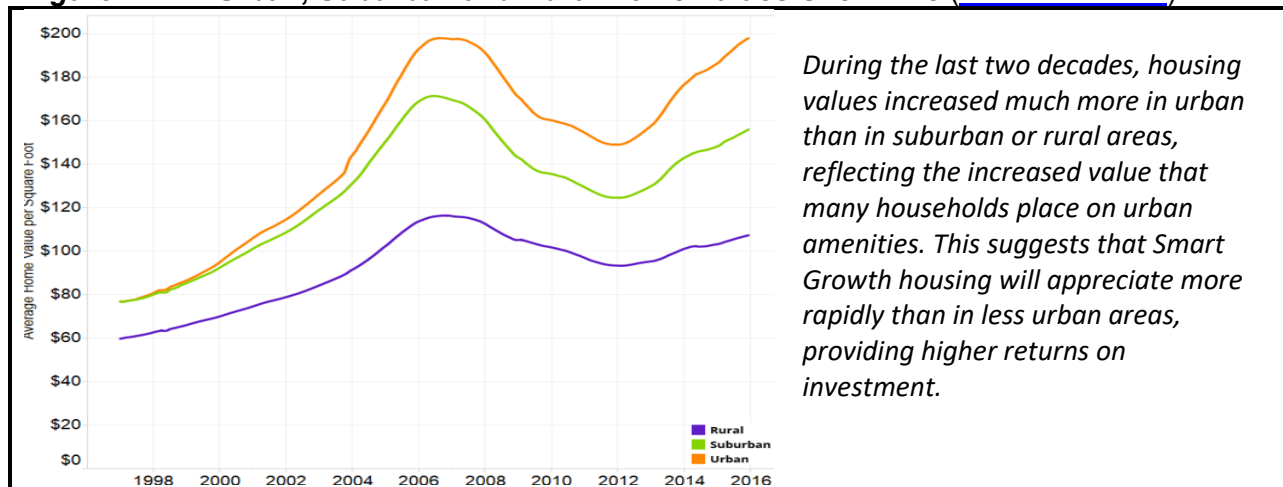
Why Urban Center Housing Values Tend To Appreciate Faster than Urban Fringe Housing

Real estate values appreciate faster in central urban neighborhoods than at the urban fringe, making it a superior investment, and experts predict this to continue over the long run for the following reasons (ULI 2016):

- Urban areas tend to be economically productive and resilient, and many of their neighborhoods are considered very livable, which attracts higher income households.
- A growing portion of households value urban amenities such as walkability, diversity, and convenient access to diverse services and activities.
- Current demographic trends (aging population, rising affordability and health concerns) are increasing the portion of households that value urban amenities. For example, walkable urban neighborhoods allow residents *age in place*, that is, continue living in their communities as they grow older and become limited in their ability to drive (AARP 2011).
- Many negative factors of urban living, including crime risk and inferior public services, have declined in recent years, and new technologies, such as improved traveler information and carsharing, are further improving the safety and convenience of urban living.
- Although North America has an abundant supply of urban fringe housing, there is a limited supply of urban neighborhood land suitable for residential development, which is likely to drive up prices.
- Many urban jurisdictions allow density increases in urban neighborhoods, which raises land values.

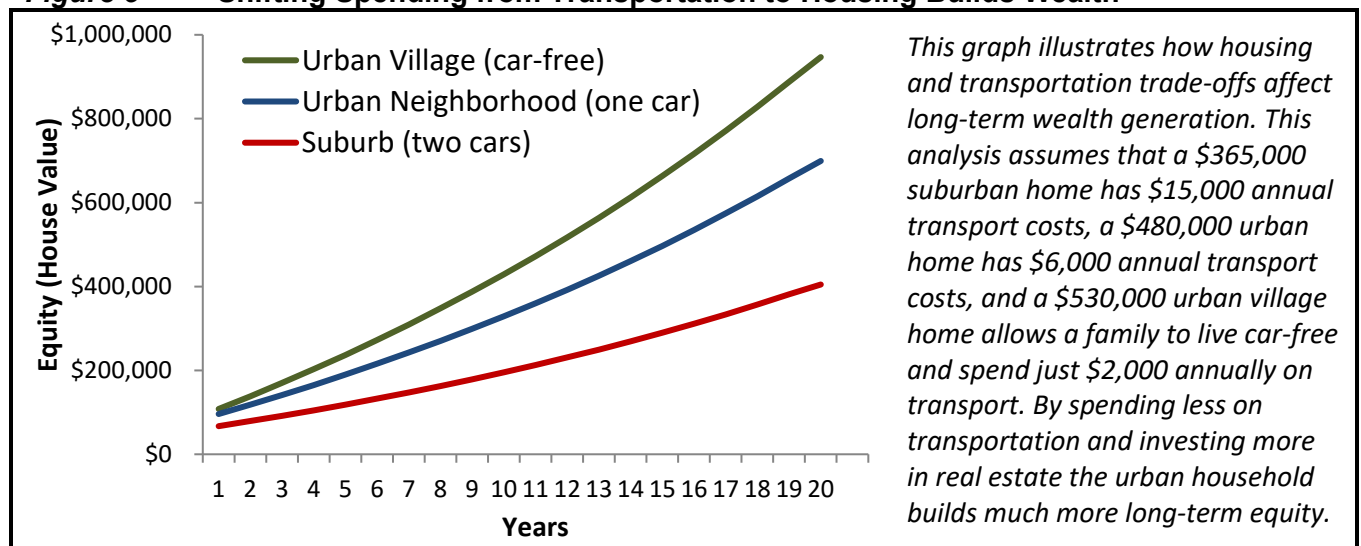
Current demographic and economic trends are causing real estate values to appreciate much faster in city centers than in suburbs, as illustrated in Figure 4. For example, in 2015, average city home values grew by 11.3% compared with 6.7% in suburbs (Pan 2016).

Figure 4 Urban, Suburban and Rural Home Values Over Time (www.zillow.com)



Experts define affordability as households spending less than 45% of their net income budgets on housing and transportation combined ([CNT 2008](#)). A typical \$80,000 annual after-tax income household can afford to spend \$36,000 annually on housing and local transportation. If they choose a suburban home with \$15,000 annual local transportation expenses they can only afford a \$1,750 monthly mortgage. With a 20% down payment and a 20-year loan at 5% interest they can afford a \$335,000 house. If the same household chooses an urban home with \$6,000 annual transport costs they can afford a \$2,500 monthly mortgage which can purchase a \$480,000 house. If they choose to live car-free in an urban village where they spend just \$2,000 annually on transportation, they can afford a \$2,833 monthly mortgage which can purchase a \$540,000 home. Although their total short-run expenses are equal, housing investments build wealth, particularly in attractive urban areas, so after a decade the urban homes accrue \$130,000 to \$230,000 more equity, and after twenty years \$300,000 to \$540,000 more equity than a suburban house, as illustrated in Figure 5.

Figure 5 Shifting Spending from Transportation to Housing Builds Wealth



This indicates the benefits of urban village planning that creates more compact, multimodal neighborhoods with diverse housing types where residents can minimize their transportation costs and find suitable, affordable homes.

Urban Village Checklist ([Agnello 2020](#); [Prince's Foundation 2020](#))

- A compact, mixed community organized around a commercial center or street.
- A mix of businesses including a full-service grocery store and other shops that serve the community's demands.
- An appropriate mix of at least 2,000 homes within a ten-minute walk of the village core.
- Multimodal planning and complete streets policies.
- Excellent walking and bicycling conditions including clean, continuous sidewalks that meet universal design standards on all streets, low traffic speeds (generally less than 20 miles per hour), Walk Score over 70.
- Frequent and affordable public transit services.
- Streetscaping to create an attractive public realm.
- Low or no off-street parking minimums and efficient parking management to minimize the number of spaces needed and encourage non-auto travel.
- 10-20% of land dedicated to parks and recreational facilities.

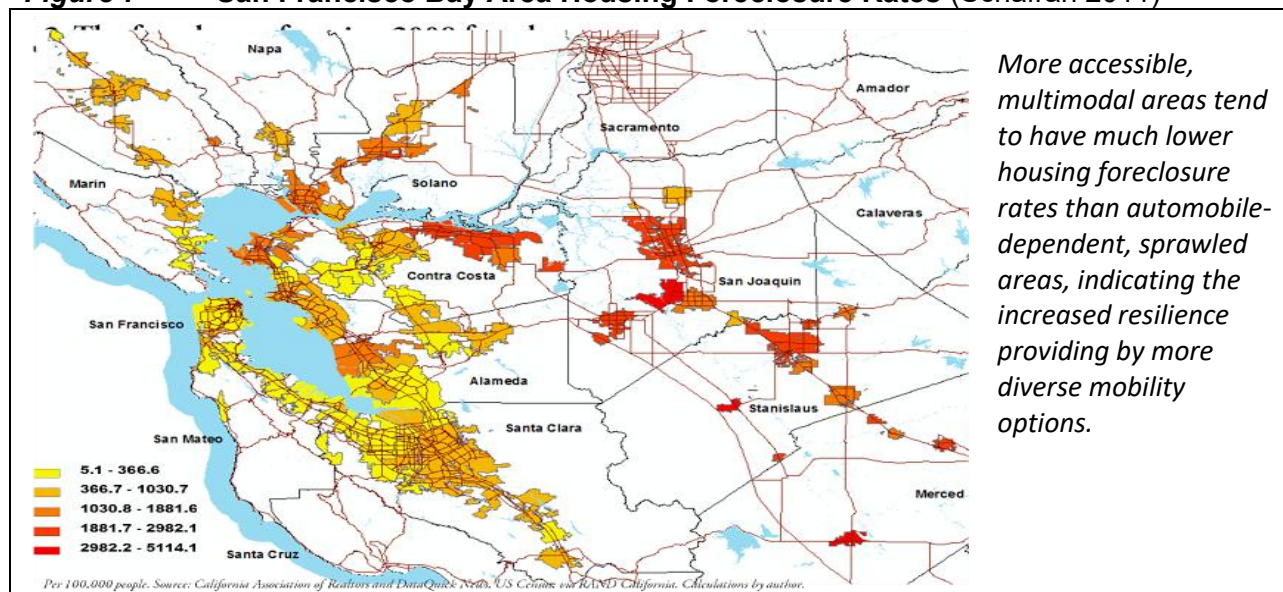
Some current policies overlook Smart Growth benefits. Conventional real estate sales practices assess housing costs without accounting for transportation costs (Figure 6), and common banking practices, which only consider housing costs and ignore transport costs, tend to favor the urban fringe house, described as “drive till you qualify” (Hanson, Schnier and Turnbull 2012; Lewyn 2013).

Figure 6 Comparing Price Per Square Foot by Urban Area (DataQuick)



Having affordable mobility options and lower energy costs (JRC 2011) tends to increase economic *resilience*, a household’s ability to respond to unexpected economic shocks such as reduced incomes or increased cost burdens. For example, if their wages decline, their car breaks down or fuel prices spike, residents of accessible, multimodal communities can commute and run errands by walking, bicycling and public transit. Residents of automobile dependent areas have no such options, and so are often forced to pay more than they can afford for cars and fuel. This helps explain significantly lower housing foreclosure rates in more compact, walkable neighborhoods (Gilderbloom, Riggs and Meares 2015; Won, Lee and Li 2017). Figure 7 illustrates this effect in the San Francisco Bay area.

Figure 7 San Francisco Bay Area Housing Foreclosure Rates (Schafran 2011)

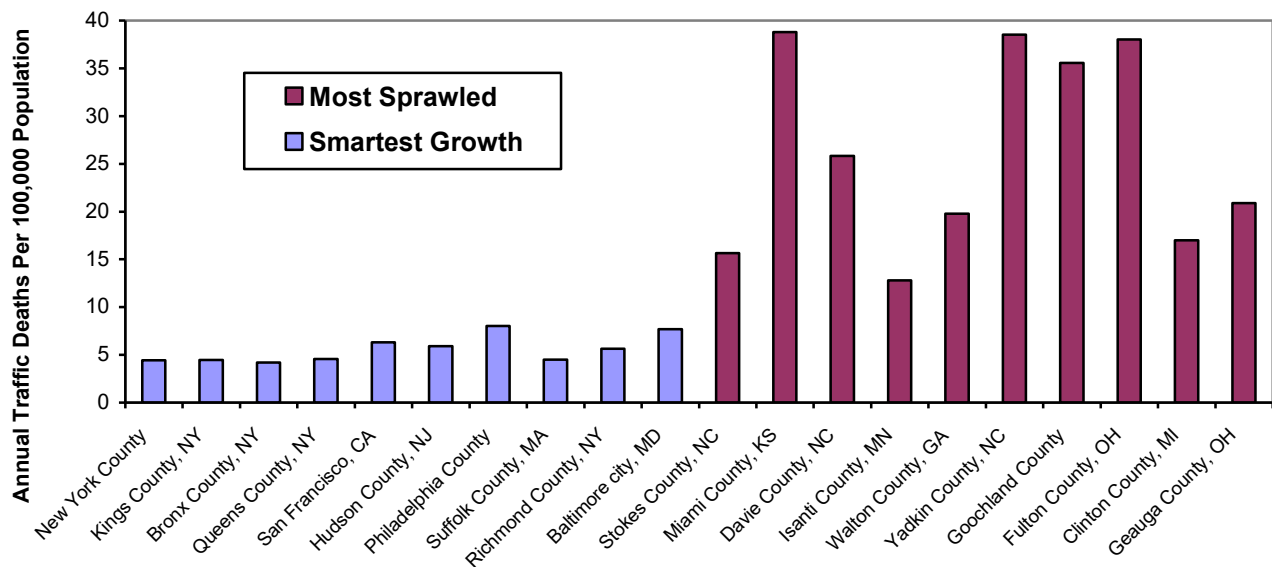


Living in an accessible, multi-modal neighborhood gives residents the *option* of reducing their transportation costs if needed due to financial stresses such as loss of income or a new household expense, an option that is unavailable to residents of more automobile-dependent areas where most adults are expected to have a personal vehicle that is needed for nearly all trips. In this way, Smart Growth development increases household economic resilience, which explains why, for otherwise comparable households, housing foreclosure rates tend to be lower in Smart Growth communities (Gilderbloom, Riggs and Meares 2015; Won, Lee and Li 2017).

Not all households will take advantage of all potential cost savings. For example, for status and recreation sake, many urban households spend more on vehicles than necessary to meet their basic mobility needs, but they benefit from have affordable options available if needed due to reduced income, vehicle failures, or energy price spikes, options that are unavailable in sprawled, automobile-dependent areas. This helps explain why urban neighborhood housing has significantly lower foreclosure rates than in sprawled areas (Lucy and Herlitz 2009; Pivo 2013; Rauterkus, Thrall and Hangen 2010), and why foreclosure rates tend to increase with neighborhood vehicle ownership rates (NRDC 2010).

Smart Growth tends to significantly increase traffic safety (Figure 8) and improve public fitness and health, due to the combination of reduced driving, lower traffic speeds, improved travel options for higher-risk drivers (youths, seniors, and people impaired by alcohol or drugs), and more walking and cycling (CDC 2010; Litman and Fitzroy 2014). Dumbaugh and Rae (2009) and Marshall and Garrick (2011) find that U.S. neighborhoods with more compact, multi-modal communities with more connected street networks have much lower per capita traffic fatality rates than sprawled, automobile-dependent areas.

Figure 8 Annual Traffic Death Rate (Ewing, Schieber and Zegeer 2003)



Sprawled counties have about four times the per capita traffic fatality rates as Smart Growth counties.

An extensive body of research indicates that Smart Growth provides significant health benefits. For example, a major study by Frederick, Riggs and Gilderbloom (2017) found that, accounting for various demographic factors, there is significant positive relationship between modal diversity (the portion of trips made by non-automobile travel modes) and positive public health outcomes including healthier

behaviors reported in the Gallup/Healthway's Well-Being Index, more leisure quality reported by Sperling's Cities Ranked and Rated, more access to exercise reported by the Environmental Systems Research Institute, less sedentary living and obesity reported in the Center for Disease Control's Diabetes Interactive Atlas, more Years of Potential Life Lost (an indicator of longevity and overall health), and higher birth weights (an indicator of infant health) reported by the National Center for Health Statistics. These relationships are stronger than many other sociological, geographical, and economic indicators including density, latitude, race, education and income, suggesting that living in a more multimodal community provides significant health benefits. Ewing and Hamidi (2014) found that Smart Growth significantly increases residents' lifespans; for every doubling in their Sprawl Index, life expectancy increases approximately 4% which translates into a three-year difference in life expectancy between residents of more and less compact counties.

A ten-year study of Perth, Australia residents found that their overall health improved if they moved from sprawled to more compact, walkable urban neighborhoods (Giles-Corti, et al. 2013). For every local shop, residents' walking activity increased by 5-6 minutes per week, and for every recreational facility available such as a park or beach, residents' physical activity increased by another 21 minutes per week. Similarly, by comparing Vancouver, BC neighborhoods, Frank, et al. (2010) found that adults living in the 25% most walkable neighborhoods walk, bike and take transit 2-3 times more, drive approximately 58% less than those in more auto-oriented areas, and are half as likely to be overweight than those in the least walkable neighborhoods, and each additional grocery store within a 1-kilometer distance from an individual's residence was associated with an 11% reduction in the likelihood of being overweight.

This is not to ignore other important factors to consider when choosing home locations. Some people are poorly suited to urban living because they own large pets, are anti-social, or uncomfortable with cultural diversity. However, some commonly-cited objections are based on inaccurate information or self-fulfilling prophecies. For example, many people believe that cities are dangerous. Although some urban areas (particularly commercial districts and areas with concentrated poverty) have higher crime rates, a law-abiding person's risk of being a crime victim are comparable in cities, suburbs and rural areas (Litman 2015). All else being equal, crime rates tend to decline with urban density and mix, due to more *passive surveillance* (also called *eyes on the street*) as more residents and by-passers can see and report possible threats (Gilderbloom, Riggs and Meares 2015). Some crimes, such as vehicle assaults, thefts and vandalism, tend to increase with vehicle ownership, and Smart Growth features that increase passive surveillance, such as improved walkability and more mixed development, tend to reduce crime rates (Hillier and Sahbaz 2006). Cities are safer than suburbs overall, considering both crime and traffic risks (Myers, et al. 2013). Some impoverished neighborhood schools perform poorly, but other urban schools perform well, and such problems tend to decline as urban neighborhoods become more diverse. Safety and school quality concerns should rationally affect which urban neighborhoods a household should consider living in, but do not really justify choosing sprawl over more compact neighborhoods.

Living in a more accessible and multi-modal neighborhood is particularly beneficial to physically and economically disadvantaged people (Jaffe 2016). It tends to increase their *integration* (they are less geographically isolated), *economic opportunity* (they have better access to education, employment and services), and *economic mobility* (they are more likely to become economically successful) (Ewing and Hamidi 2014; Lens and Monkkonen 2016). Using data from the Harvard [Equality of Opportunity Project](#), Ewing, et al. (2016) found that doubling their county compactness index increases by about 41% the probability that a child born to a family in the lowest income quintile will reach the top quintile by age 30. Using different research methods, Chyn (2016) found that children who left concentrated poverty neighborhoods are 9% (4 percentage points) more likely to be employed as adults relative to their non-

displaced peers, and have \$602 higher average annual earnings – a 16% increase relative to their counterparts who remained in concentrated poverty.

Table 4 lists various advantages and disadvantages of living in urban neighborhoods that households should consider when making location decisions.

Table 4 Advantages and Disadvantages of Living in Compact Urban Neighborhoods

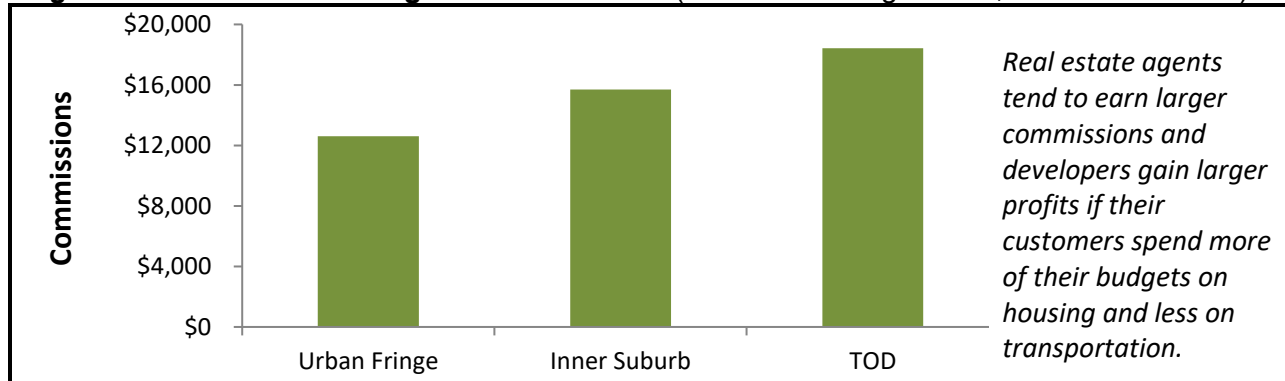
Advantages	Disadvantages
• Increased household wealth generation • Transportation cost savings • Improved accessibility, less time spent driving • Improved mobility for non-drivers and reduced chauffeuring burdens on drivers • Increased economic resilience and opportunity • Increased traffic safety • Improved fitness and health • More housing options (e.g., apartments) • More cultural diversity • Increased economic opportunity and mobility	• Higher housing costs per square foot • Less privacy • Less greenspace (smaller gardens) • More noise and air pollution exposure • More local traffic and parking congestion • Higher crime and lower quality schools in some neighborhoods

Smart Growth has various advantages and disadvantages to consider when choosing home locations.

Businesses

Smart Growth benefits many businesses and industries (USEPA 2013). Real estate agents earn higher commissions and developers can earn greater profits if their customers spend less on transportation and more on housing. Figure 9 compares the commissions earned on the three housing options described in Table 2: the TOD house provides a 46% larger commission than the urban fringe house. Developer profits also tend to increase with the higher housing demand and prices.

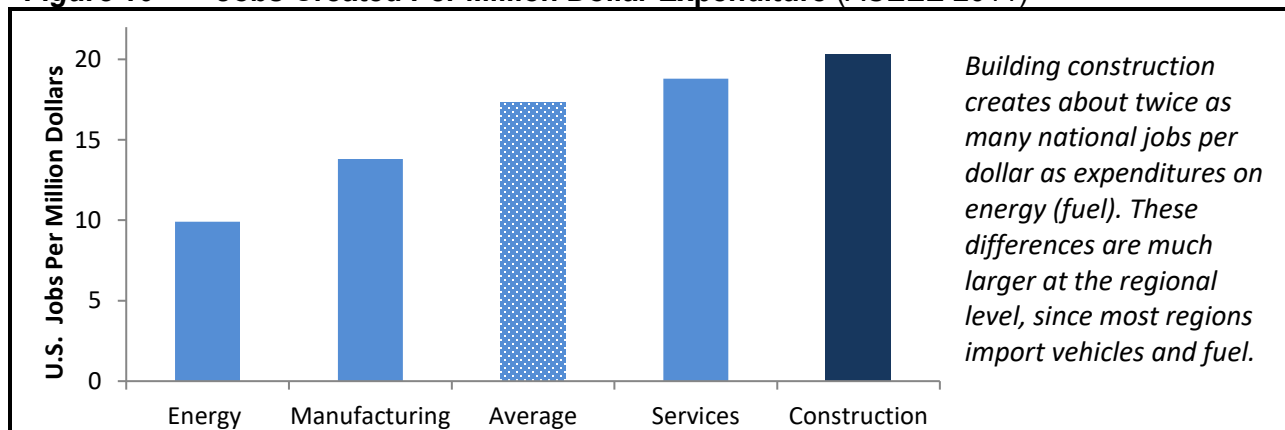
Figure 9 Real Estate Agent Commissions (Table 2 Housing Values, 5% Commissions)



This does not mean that real estate agents or developers should expect all households to choose Smart Growth neighborhood homes even if they truly prefer urban fringe locations, but they have good reasons to encourage home buyers to consider housing in neighborhoods with lower transportation costs and to explain the various benefits they can enjoy, as previously described.

More compact, multi-modal development tends to increase regional economic activity in several ways (Angel and Blei 2015; IEDC 2006; Kooshian and Winkelman 2011). More compact and accessible development increases the number of jobs available to potential workers and the pool of workers available to businesses (Levine, et al. 2012); increases total jobs and property values in an area; reduces transportation costs; increases infrastructure efficiencies and reduces parking facility costs; and provides agglomeration efficiencies (Melo, Graham and Noland 2009; Renaissance Planning Group 2012). Residents of compact, walkable urban neighborhoods tend to shop locally, increasing local business activity and helping to create more attractive commercial centers.

Figure 10 Jobs Created Per Million Dollar Expenditure (ACEEE 2011)



Because housing development is more labor-intensive than vehicle and fuel production, shifting spending from transportation to housing increases regional employment and business activity (Figure 8). According to one study, a one million dollar expenditure on either new construction or housing renovations generates approximately three full-time-equivalent direct jobs plus ten indirect and ancillary jobs, which is far higher than expenditures on motor vehicles and fuel (FCM 2012). Because public transit is particularly labor intensive, shifting expenditures from private vehicles to public transit tends to significantly increase regional employment and productivity, as indicates in Table 5.

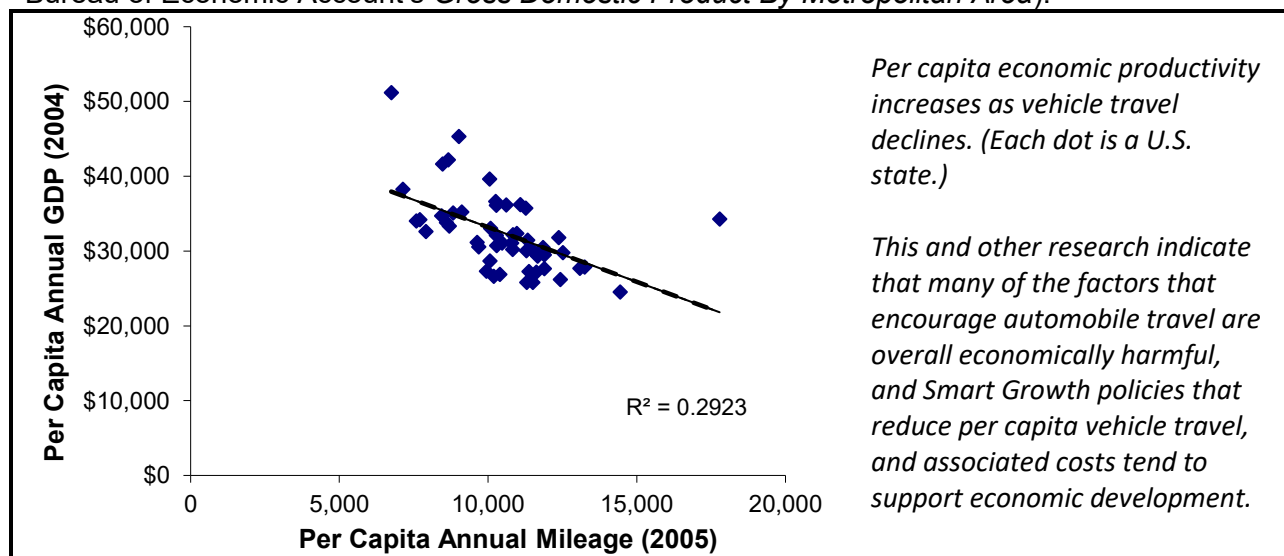
Table 5 Economic Impacts per \$1 Million Expenditures (Chmelynski 2008)

Expense category	Employment	Compensation (wages)	Value Added
	Full Time Equivalent Jobs	2006 Dollars	2006 Dollars
Auto fuel	12.8	\$516,438	\$1,139,110
Other vehicle expenses	13.7	\$600,082	\$1,088,845
Average household bundles	17.3	\$627,465	\$1,292,362
Public transit	31.3	\$1,591,993	\$1,815,823

A million dollar spending shifted from fuel to a typical bundle of consumer goods adds 4.5 jobs to the U.S. economy, and shifts to public transit spending add 18.5 jobs. Regional impacts are much larger.

These factors help explain why per capita Gross Domestic Product (GDP) tends to decline as per capita vehicle travel increases (Figure 11): many of the factors that lead to sprawl and automobile dependency tend to reduce economic productivity.

Figure 11 Per Capita GDP and VMT For U.S. States (FHWA's *Highway Statistics* and the Bureau of Economic Account's *Gross Domestic Product By Metropolitan Area*).

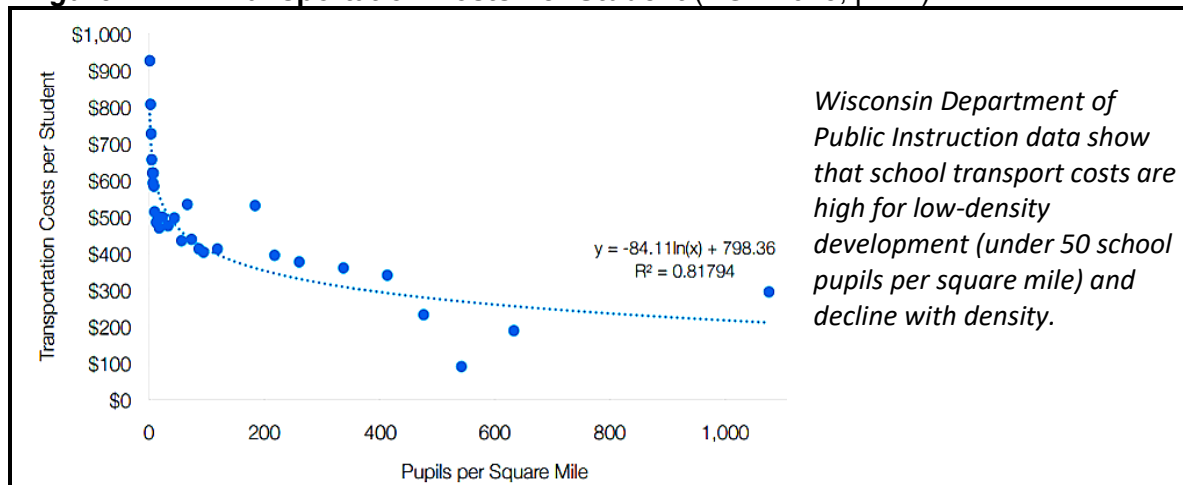


As a result, real estate and development industries, business organizations, and economic development agencies all have good reasons to encourage households to choose homes located in more accessible, multi-modal neighborhoods where they can spend less of their budget on transportation and more on housing, and support Smart Growth development policies that help create such neighborhoods.

Local Government

Smart Growth can provide fiscal benefits to municipal and regional governments by reducing costs and increasing revenues (CMAP 2014; McKeeman 2012; OEP 2012). More compact development tends to reduce the costs of providing public infrastructure and services (Burchell, et al. 2005; Litman 2014). Smart Growth development typically reduces public infrastructure construction costs by a third and ongoing public services costs by 10% (SGA 2013). It costs government less to provide services such as emergency response and school transportation in more compact areas as illustrated below. Although rural residents traditionally accept lower quality services, such as unpaved roads and volunteer fire departments, sprawled development attracts households that demand urban-quality services in low-density, urban fringe locations where they are expensive to provide.

Figure 12 Transportation Costs Per Student (SGA 2015, p. 11)



If households spend less on transport and use the savings to purchase more valuable homes, they pay more total property taxes, as illustrated below. Smart Growth policies can further increase tax revenue if they allow more commercial development.

Figure 13 Annual Property Tax Payments

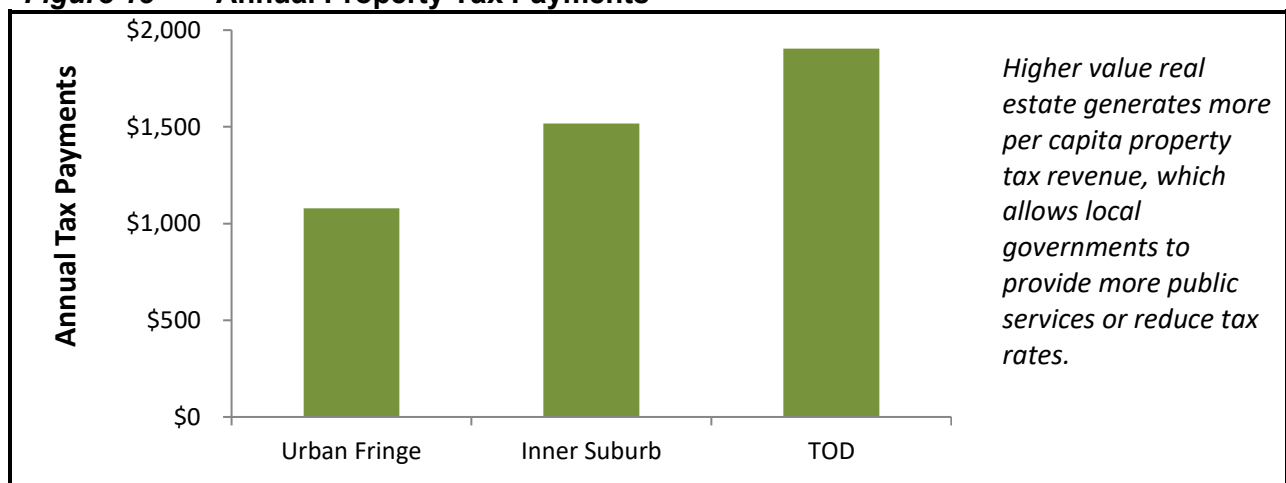
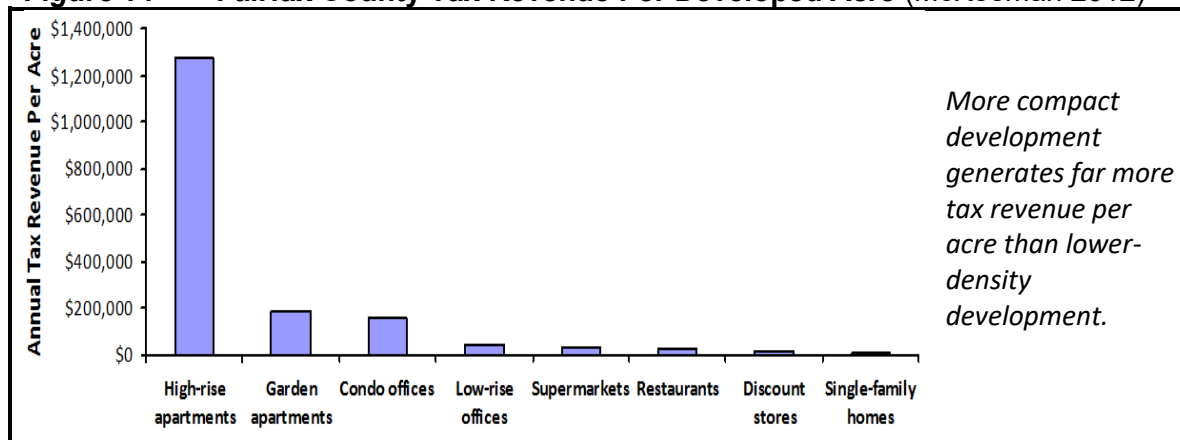
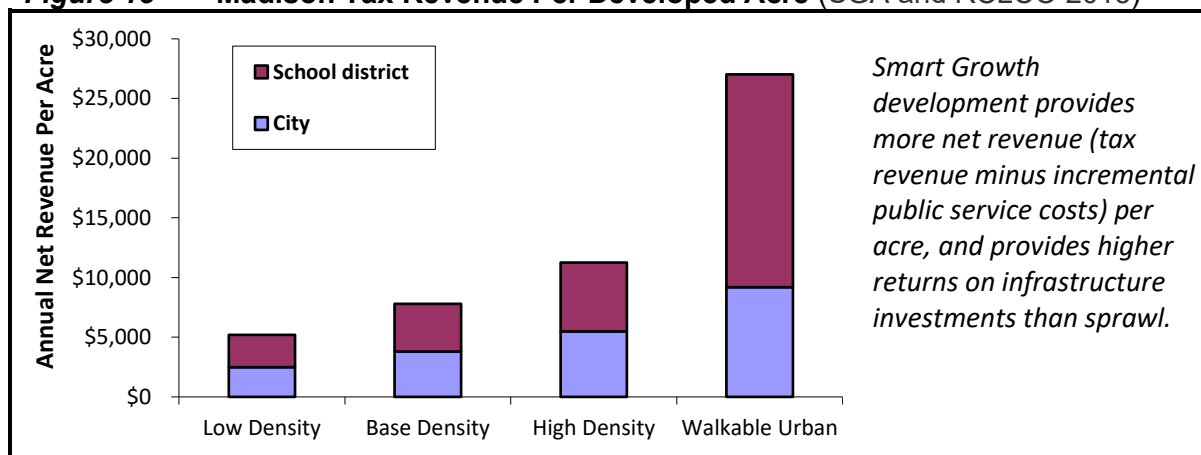


Figure 14 Fairfax County Tax Revenue Per Developed Acre (McKeeman 2012)



Smart Growth also increases tax revenues per acre of land, and therefore total government revenue within a particular jurisdiction (Minicozzi 2012). Figures 14 and 15 illustrate this effect.

Figure 15 Madison Tax Revenue Per Developed Acre (SGA and RCLCO 2015)



For example, one study found that 3.4 acres of mixed urban development in Sarasota County, Florida provides the same number of housing units as 30.6 acres of suburban housing, consumes about one-tenth the land, has only 57% the infrastructure costs, and provides 8.3 times as much tax revenue (PIP 2009). Because of their lower costs and higher revenues, the annual return on infrastructure investment (annual tax revenue relative to annualized public infrastructure costs) is about 35% for compact development, compared with only 2% for sprawl, so an urban highrise repays its infrastructure costs in about three years, compared with 42 years for suburban multi-family development.

The additional revenue can allow municipal governments to provide better public services or reduce overall tax rates, and the additional business activity increases overall economic productivity and resilience. Because Smart Growth residents tend to impose lower public service costs and pay more property taxes per capita, they often subsidize households in sprawled areas (Nenshi 2016). As a result, municipal governments have good economic reasons to implement policies that support more compact and multi-modal development where residents can spend less on transport and more on housing.

Benefits Summary

Table 6 summarizes various Smart Growth benefits identified in this report. Our challenge is to communicate these benefits to appropriate audiences using concepts and terms that they understand.

Table 6 Summary of Direct Smart Growth Benefits

Households	Businesses	Local Governments
- Increased household wealth generation - Transportation cost savings - Improved accessibility, less driving - Improved mobility for non-drivers and reduced chauffeuring burdens on drivers - More economic resilience and opportunity - Increased traffic safety - Improved fitness and health - More housing options - More cultural diversity - More economic opportunity and mobility	- Larger real estate commissions - Increased housing demand and developer profits - More regional employment, business activity and economic productivity - More local customers - Increased pool of potential employees - Infrastructure savings, such as reduced parking facility costs	- More efficient public infrastructure and services - More tax revenue per capita and acre - More diverse and resilient tax base

Smart Growth provides various benefits to households, businesses and local governments.

Smart Growth implementation involves various policy changes. Table 7 identifies their typical impacts on households, businesses and local governments. It may be helpful to communicate the benefits of particular policy changes on particular groups. For example, allowing more multi-family housing with reduced parking requirements benefits lower-income households that want affordable housing in accessible neighborhoods, and allowing denser and more mixed development can help businesses.

Table 7 Impacts of Typical Smart Growth Policy Changes

Policy Changes	Households	Businesses	Local Governments
Allow denser and more mixed development	Allows more households to live in urban areas	More local development, business activity and agglomeration efficiencies	Increases tax revenues
Allow more multi-family housing	Allows more low-income households to live in urban areas	More local development and business activity	Increases tax revenues but may increase some public service costs
Reduce parking requirements and more efficient parking management	Reduces housing costs, particularly for carfree households	Reduces building costs	May generate revenue but requires more enforcement
Improve walking, cycling and public transit	Provides savings, improves mobility and health	Can increase business activity	Can reduce costs compared with car travel
More public services located in city centers, less at the urban fringe	Benefits urban residents, increases costs to urban fringe residents	Increases urban business activity, agglomeration efficiencies	Tends to increase building costs and increase efficiencies
Location-based development fees (charge higher fees for urban fringe housing)	Provides savings to urban residents, increases costs to urban fringe residents	Tends to reduce costs to urban businesses	Can reduce the costs of providing public services

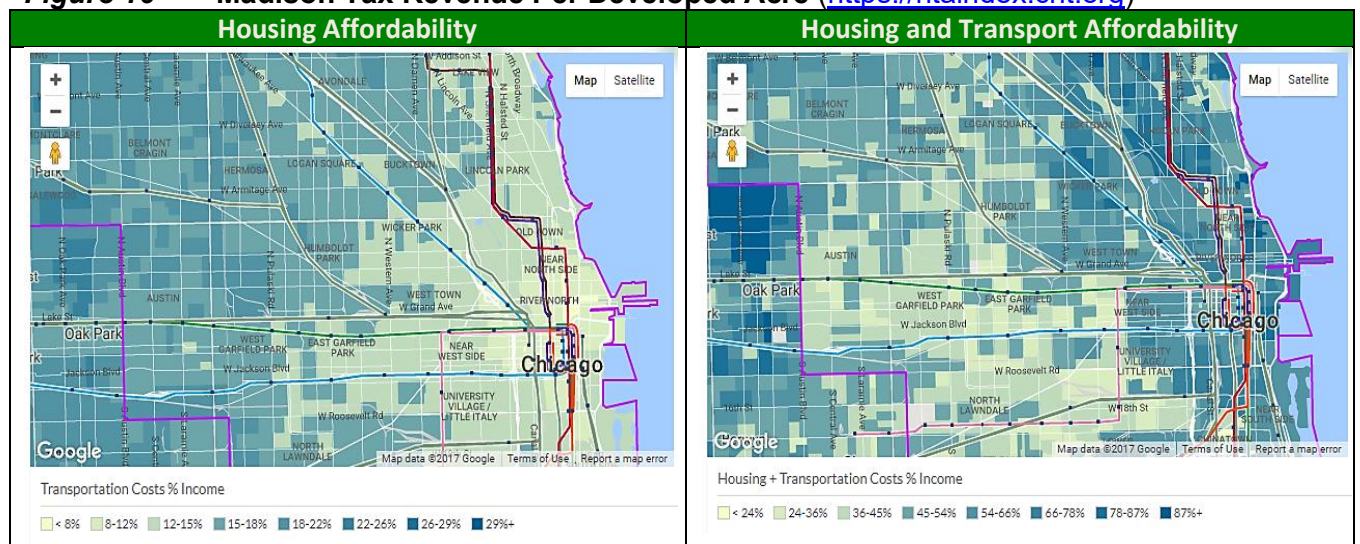
Smart Growth involves various policy changes that have various impacts.

Resources for Evaluating Smart Growth Benefits

Several information resources can help measure and communicate the benefits of Smart Growth locations. My blog, *Smart Growth Loves Heatmaps* ([Litman 2021](#)) describes websites that illustrate these benefits with informative and beautiful heatmaps.

For example, the *Housing and Transportation (H+T) Affordability Index* provides information on the cost of both housing and transportation as a portion of average household income at the neighborhood level, in easy to understand maps. While housing alone is traditionally deemed affordable when consuming no more than 30% of income, the H+T Index incorporates transportation costs—usually a household's second-largest expense—to show that location-efficient places can be more livable and affordable. Figure 16 illustrates its results for the Chicago area. The map on the left shows average housing spending relative to incomes, the map on the right shows average housing and transportation spending relative to incomes. Note the greater housing and transportation affordability near many rail transit stations, indicating that transit-oriented development can increase overall affordability.

Figure 16 Madison Tax Revenue Per Developed Acre (<https://htaindex.cnt.org>)



These maps illustrate the H+T Affordability Index maps. Lighter shades indicate greater affordability. The map on the left shows housing affordability, the map on the right shows housing and transportation affordability. Note the greater overall affordability near many rail transit stations.

TRUE (<https://truebytlc.com>) provides information for real estate agents and developers on housing that reflect home purchase, operations (e.g., utility) and transportation affordability goals.

Table 8 The True Lifestyle Cost Method (<https://truebytlc.com>)

Mortgage	Utilities	Transport
Interest rates	House size	Work location
Taxes	House age	Local transportation options
Homeowners insurance	Weather data	Fuel prices
	Type of heating and cooling	Vehicle expenses (maintenance and tools)
	Number of occupants	Vehicle insurance

The TRUE calculator considers various housing and transportation cost factors.

Critiquing and Improving Information Resources

Although many organizations and publications promote Smart Growth, few effectively communicate the benefits described in this report. This section evaluates gaps and recommends improvements.

Many professional and advocacy organizations promote Smart Growth, but they primarily consider a public policy perspective, and tend to focus on a limited set of impacts. Few provide information oriented toward consumers making household location decisions. For example, the [About Smart Growth](#) and [Smart Growth Online](#) websites describe how Smart Growth can provide infrastructure and transportation resource savings, and livability benefits, but there is no information oriented toward consumers making location decisions concerning the increased wealth generation of shifting household expenditures from transport to housing, economic resilience from having more affordable transport options, or traffic safety benefits. These websites include information for developers concerning successful Smart Growth projects, but no information for real estate professionals concerning the higher commissions they can earn, or toward local officials concerning increased per capita tax revenues.

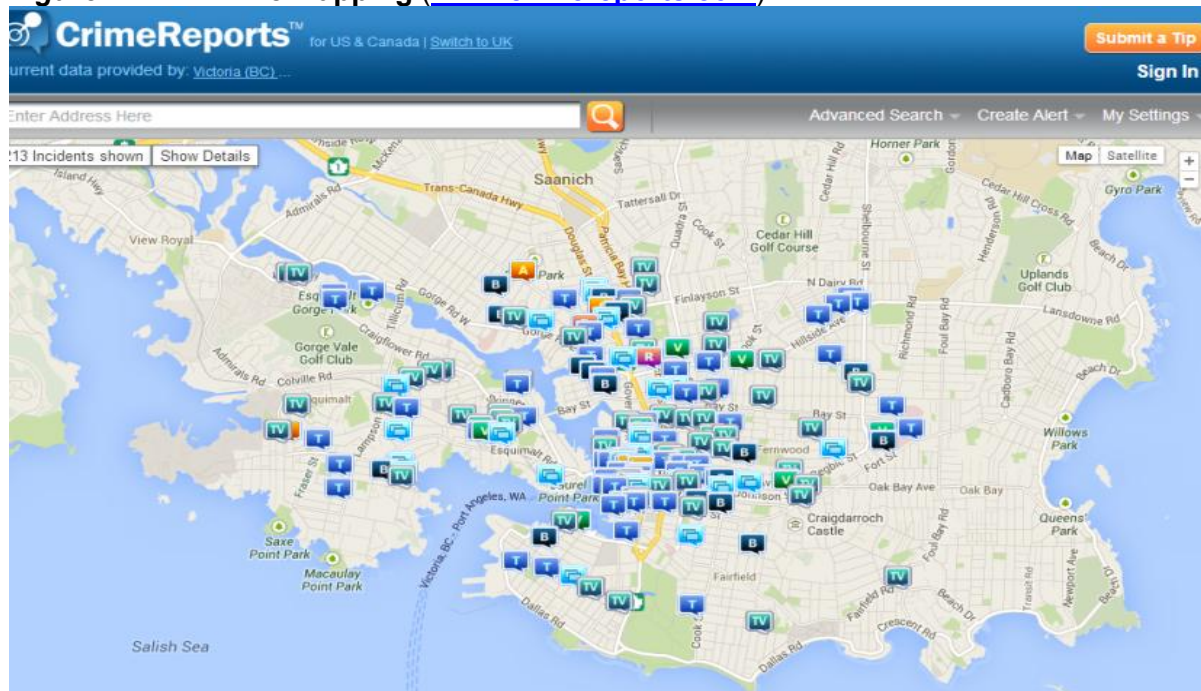
There is growing recognition of the trade-offs between housing and transport costs, including development of tools such as the *Housing and Transportation (H+T) Index* that helps households understand these trade-offs, and the Location Efficient Mortgage concept can allow some households to borrow more for a home in a more accessible location due to its lower transport costs (CNT 2015), and some highlight community livability benefits (Knight Frank 2020), but they seldom highlight the additional wealth generated when households shift expenditures from transport to housing.

Some popular real estate advisors recognize some benefits of urban living, such as improved neighborhood walkability and reduced commute travel time, but ignored many of the benefits discussed in this report. For example, a recent *MoneySense* article, [City or Suburbs: Where Can You Afford to Live?](#) compared advantages and disadvantages of urban and suburban living, including shorter and cheaper commutes in urban areas, and cheaper homes and larger yards in suburban areas, but overlooked most benefits of choosing an urban location identified in this report, such as increased household wealth generation and resilience, increased safety and health, and improved mobility for non-drivers.

To discuss Smart Growth benefits it is necessary to overcome some myths. Some people assume that Smart Growth requires all households to be carfree and live in high-rise apartments, with no suburban development. In fact, in most cities (those that are not geographically constrained), most benefits can be achieved with moderate densities (10-20 residents per acre), with most households living in a single-family home with a car. Smart Growth is not anti-suburb. Compact suburbs with good walking and cycling conditions, good bus services, diverse housing types, and an attractive downtown or commercial street, can achieve most Smart Growth benefits.

It is also important to address myths about the risks and problems of urban living. Many people have exaggerated fears about urban crime rates, due to outdated and inaccurate information. For example, crime maps (Figure 17) show more crimes in urban neighborhoods than at the urban fringe, which suggests that cities are dangerous. But dense, mixed urban areas have more of just about everything per area (acre, hectare, square-mile or -kilometer): more people, businesses, wealth, poverty, social services, productivity, tragedy, generosity and crime, and some types of crime are associated with certain land use types, such as banks and bars. As a result, the relatively high number of crimes reported in city centers does not really indicate that denser development causes responsible people to become criminals or increases the risk a typical person faces of becoming a crime victim (Lerner 2014).

Figure 17 Crime Mapping (www.crimereports.com)



Crimes tend to concentrate in urban centers due to more people, businesses, motor vehicles, poverty and social services. This does not mean that increased development density increases total crime or that individuals face greater risk by living in urban neighborhoods.

Smart Growth advocacy, including information in this report, is based on rational arguments about the benefits of more compact, accessible, multi-modal development. Such information is useful but insufficient because households make decisions based on their emotions as well as their minds. It is therefore important to use market analysis techniques to better understand the factors that affect these decisions, and develop appropriate responses. Smart Growth marketing materials can emphasize positive concepts such as those in the box below, plus images and stories that illustrate direct benefits to households, businesses and local governments. These materials can target specific demographic groups that are facing location decisions.

Examples of Positive Smart Growth Terms and Concepts

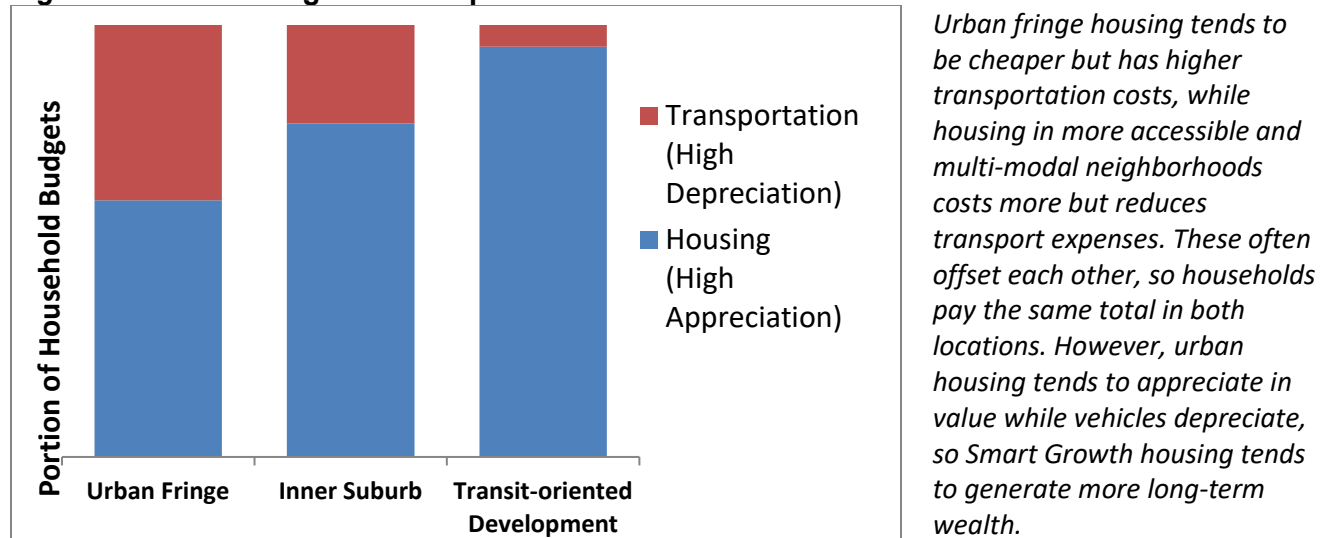
- | | | |
|--|-----------------------------------|---------------------------------|
| • Convenience and fun | • Walk and bikeability | • Local economic development |
| • Transportation cost savings | • Fitness and health | • Economic resilience |
| • Shorter commutes: less stress and more family time | • Community livability & vibrancy | • Outstanding investment values |
| | • Cultural diversity | • Reduced traffic accident risk |

This is not intended to criticize Smart Growth advocacy organizations, but rather to identify additional arguments and information resources that can further increase their effectiveness.

Conclusions

Families often make trade-offs between housing and transportation costs: they can spend less for a house at the urban fringe where transportation costs are high, or spend more for housing in a more accessible, multi-modal neighborhood where they can own fewer cars and drive less, and spend significantly less on vehicles and fuel. In the short run, these trade-offs often approximately offset each other so the household spends the same total on combined housing and transportation in either location. However, over the long run, housing tends to appreciate in value while vehicles depreciate, so Smart Growth housing tends to generate far more long-term wealth.

Figure 18 Housing and Transportation Cost Trade-Offs



In a typical situation, a sprawled, automobile-dependent urban fringe location requires the household to spend least 20% of its budget on transport, but if the same household locates in a central, multi-modal urban neighborhood, must only spend 5% or less of its budget on transport. Using standard investment guidelines that households devote no more than 45% of their total budgets on transport and housing combined, a \$60,000 annual income household can afford a \$251,975 urban fringe home or a \$368,405 Transit-Oriented Development (TOD) home. The TOD home accrues an additional \$63,789 equity (wealth) after ten years, \$448,217 after 25 years, and \$1,016,561 after 40 years, indicating that an average-income household can retire with an extra million dollars simply by choosing homes with low transport costs and spending the savings on real estate or other investments with 3% annual returns.

Smart Growth neighborhoods provide other benefits to households, businesses and local governments, including reduced commuting time, increased economic resilience and opportunity, improved mobility for non-drivers which reduces drivers' chauffeuring burdens, increased safety and fitness, increased local business profits and employment, infrastructure cost savings, and increased tax revenues.

Consumer expenditure survey data understates these benefits because living in an accessible, multi-modal neighborhood gives residents the ability to reduce their transportation costs if needed due to financial stresses such as loss of income or a new household expense, an option that is unavailable to residents of more automobile-dependent areas where most adults are expected to have a personal vehicle that is needed for nearly all trips. In this way, Smart Growth development increases household

economic resilience, which explains why its residents experience far lower foreclosure rates than similar households in automobile-dependent areas.

There are many ways that households can take advantage of these opportunities; they do not need to live car-free in a central city Transit-Oriented Development to achieve these benefits. For example, households can reduce their vehicle costs by choosing a suburban home that is within convenient walking distance of shops, schools and bus routes, and so needs just one rather than two cars.

By creating more compact and accessible communities where residents drive less and rely on more affordable modes, Smart Growth policies can provide direct benefits to households, businesses and local governments. These benefits are often overlooked or undervalued in policy analysis. As a result, advocates can increase support for Smart Growth by providing better information about these benefits.

Many current real estate marketing practices tend to favor sprawl over Smart Growth. Houses are often compared by *cost per square foot*; measured that way, urban fringe homes often seem better investments than TOD, since they offer more space per dollar, although they actually build less equity over the long run. Similarly, simplistic crime analysis implies that urban areas are dangerous, although cities actually tend to be safer and healthier overall. More comprehensive and accurate information can encourage households to choose more accessible, multi-modal neighborhood.

This is a timely issue. Consumer surveys indicate that a large and growing portion of households value urban neighborhood features such as transportation cost savings and neighborhood walkability, and are willing to pay a premium to do so. These households are more likely to choose urban locations and support Smart Growth policies if given more positive information about their potential benefits.

Advocates can better communicate these benefits to households, businesses and community leaders. Smart Growth is often portrayed as a personal sacrifice needed to reduce public service costs and environmental risks. We can change this narrative to include more direct benefits. To build support, Smart Growth advocates can employ marketing techniques, to better understand people's fears and prejudices and identify appropriate positive messages concerning the benefits of urban living. This should include appropriate analysis tools that quantify benefits, such as the additional household wealth generated, plus safety and health benefits, of choosing to live in an accessible neighborhood, plus positive images and stories that touch people's hearts.

Smart Growth is a great product. Our challenge is to better answer the question that many stakeholders ask, "What's in it for me?"

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