Friends for Albert Shen
P.O. Box 14235
Seattle, WA 98114
connect@albertshen.com
www.albertshen.com

Planning for Prosperity

What Can Seattle Learn from Economic Research on Transportation, Affordable Housing and Local Economic Development?

by Andrew Chamberlain*
Chair, Economic Policy Team
Friends for Albert Shen

July 2013

* Department of Economics, University of California, San Diego. The author is a Seattle native and graduate of the University of Washington (Economics, 2001). He can be reached at adchamberlain@ucsd.edu.

Introduction

Seattle has become famous for its vibrant culture, progressive lifestyle and environmental beauty. Our thriving arts community, bike-friendly roads and scenic neighborhoods routinely rank Seattle among the nation's best cities to live in.[1] While these lifestyle amenities are valuable on their own, they also depend crucially on a healthy local economy. A job market that provides meaningful work and rising middle-class incomes is the key to sustaining Seattle's cherished cultural amenities in coming decades.

This is not a new idea. Trends in the local economy have long shaped the Pacific Northwest's unique culture. The Pike Place Market, the Seattle waterfront, the Chinatown/ID neighborhood and the Scandinavian-influenced Ballard neighborhood are all cherished Seattle icons. Today they are considered local culture. But each originally began as a key part of the local economy. And the working-class—and often immigrant—families who helped build them were attracted to Seattle by our thriving economy.

"Seattle's cultural vitality depends on a healthy, growing economy."

In more recent decades Seattle has become a magnet for what social scientist Richard Florida calls the "creative class."[2] Artists, engineers and scientists have flocked to our city. They come for the lifestyle amenities. But what makes them stay? For many, the answer is economic opportunity: the belief that Seattle will remain a place where widely-shared prosperity is possible for them, their children and their grandchildren. An economy that provides rising wages and business opportunities also provides the leisure time and income that are essential for maintaining the progressive, culturally rich and environmentally friendly community Seattle has become famous for.

What is Seattle's plan for maintaining a healthy economy in the coming decades? Are city leaders doing the right things? In this article we briefly review lessons from the economic literature in three areas that are key to Seattle's continued economic vitality: (1) transportation; (2) affordable housing; and (3) local economic development.

Key Findings

Transportation	Affordable Housing	Economic Development
• Transportation investments provide economic benefits to local workers and companies.	• Housing affordability is a critical issue for roughly 15 percent of low-income Seattle households.	• Development policy should focus on raising per capita incomes of Seattle residents.
• Light rail expansions should focus on connecting current and future employment centers.	• Rent subsidies may be an equitable way to offset the effect of regulations that raise rents.	• Customized training connecting companies and workers is an effective development policy.
• A variety of dedicated local transportation revenue options are available.	• Inclusionary zoning can help create affordable housing but also has unintended side effects.	• Early childhood education programs are powerful economic development tools.

[1] Alex Conrad, "America's 50 Best Cities," *Business Week*, September 28th, 2012.
[2] Richard Florida, *The Rise of the Creative Class*. Basic Books, 2002.

I. What Works in Transportation?

If downtown is the commercial heart of Seattle, the city's transportation systems are its veins and arteries. Roads, light rail, buses and bike lanes shuttle families between home, workplaces, shopping, nightlife, recreation and more. Despite growth in telecommuting and e-commerce in recent years, transportation remains the foundation of Seattle's economy.

Just as a healthy body requires a smoothly functioning circulatory system, cities require a well-functioning transportation system—one that is affordable, reliable, uncongested, and consistent with our broader social and environmental goals. Conversely, just as congested arteries can lead to congestive heart failure in a body, inconvenient rail and bus connections, road congestion and long commute times can hurt Seattle's economic vitality.

"Transportation is the foundation of a healthy Seattle economy."

Over the next decade, Seattle will experience unprecedented transportation investments including LINK light rail across I-90, bridge reconstructions, bike and pedestrian improvements, a new SR99 tunnel, a new streetcar line, freight plans, high capacity transit to Ballard and more. However, many transportation challenges remain. As city leaders work to knit this patchwork of projects into a cohesive strategy, it's worth reviewing what economic research tells us about the benefits of these investments to the local economy.

Public transportation affects cities in many ways: socially, politically, aesthetically and more. Here we narrow our focus to the economic effects. How does transportation benefit Seattle's economy?

- Most economic research on transportation falls into four categories: (1) the impact on local companies (e.g., output, costs and productivity); (2) the effect on individual wages and jobs; (3) the rate of return earned by transportation projects compared to other possible city investments; and (4) the impact of light rail on employment patterns.

- *Impact on Local Companies:* Many studies show transportation investments help local companies by lowering the cost of doing business. One recent literature review found all nine of the studies it examined found a negative relationship between local public transportation spending and business costs.[3] Most studies show a 10 percent increase in Seattle's public transportation capital could cut local business costs by as much as 0.5 percent to 2.0 percent.[4] The large numbers of studies in this area with similar findings provide clear evidence that transportation investments lower costs for local businesses. A typical example of this type of benefit in Seattle is from investments in freight mobility to and from the Port of Seattle, which have a clear impact on shipping costs.

- *Impact on the Size of the Economy:* Another group of studies shows transportation investments can directly boost the local economy's output and increase the size of the

[3] Bhatta and Drennan (2003).
[4] See for example Nadiri and Mamuneas (1994).

economy.[5] Twelve of fifteen prominent studies in this area find transportation has a positive effect on local economic growth.[6] A typical finding is that a 10 percent increase in public transportation capital can boost the size of Seattle's economy by 2.5 percent to 5.6 percent, although some studies find smaller effects as low as 0.4 percent.[7] One limitation of this research is that most studies focus on state-level transportation spending, so local effects could be smaller.

- *Impact on Family Wages:* Some studies examine whether local transportation investments can directly raise wages of city residents. Of the four major studies reviewed in Bhatta and Drennan (2003) three found transportation had a positive effect on wages. A typical estimate is that a 10 percent increase in public transportation capital raises annual per capita income about 1 percent.[8] The evidence on local job growth is more mixed: Of the seven studies reviewed by Bhatta and Drennan, only four found a positive effect.

- *Return on Transportation Investments:* Other studies have explored whether local transportation projects are a good financial investment for cities, compared to the many other investments they could spend tax dollars on. One study estimates the return on investment to "public capital" like transportation infrastructure at between 4.9 percent and 7.2 percent—well above typical interest rates on municipal bonds.[9] Another study of road investments in Maryland found rates of return of up to 10 percent, although estimates vary widely by industry.[10] Each illustrates the benefits of well-designed transportation investments in Seattle.

"Many local transportation revenue options are available."

- *Light Rail and Employment Patterns:* As Seattle expands light rail, what advice can economic research offer? A 2012 study of successful transportation investments by 371 transit providers in the nation's 100 largest cities offers some general lessons:[11] (1) the main goal of transit should be connecting workers and employers, and transit expansions should match current and future employment centers; (2) private-sector firms located near rail lines may be able to support local transit by helping finance nearby capital improvements; and (3) cities should work to make high-density construction near rail lines more cost-effective, in part by re-thinking anti-density policies such as mandatory minimum parking requirements.

- *Local Funding Sources:* How should Seattle pay for transportation investments? The Seattle Department of Transportation receives some funding from local taxes, but most major transportation funding comes from state and federal governments. Are there better local revenue options? Many revenue options are available to the city, ranging from auto insurance taxes to sales and use taxes. For a detailed assessment of the pros and cons of more than a dozen local transportation revenue options, see Metrolinx (2013).[12]

---

[5] See for example Aschauer (1989, 1991); Forkenbrock and Foster (1990); Babcock et al. (1997); and Ozbay et al. (2003, 2006, 2007).
[6] See Bhatta and Drennan (2003); and Gramlich (1994).
[7] See for example Ozbay et al. (2007).
[8] Duffy-Deno and Eberts (1991).
[9] Nadiri and Mamuneas (1994).
[10] RESI (1998).
[11] Tomer (2012).
[12] The complete Metrolink report is available at www.bigmove.ca/wp-content/uploads/2013/05/AECOM-KPMG-Big-Move-Implementation-Economics-Revenue-Tool-Profiles.pdf.

II. What Works in Affordable Housing?

Affordability of housing is a critical issue in Seattle. Housing costs dominate most family budgets and influence all other economic decisions. The usual rule-of-thumb from personal finance is that housing costs should not exceed 30 percent of income. While most Seattleites are below this threshold, a significant number of poor families spend more than 50 percent of income on rent—a common threshold used to define unaffordability. For these families, housing affordability in Seattle is a serious concern.

How to Think about Affordability

- When is housing not affordable? The answer depends on two factors: (1) the distribution of income in Seattle, and (2) the level of rents and home prices. Housing can become unaffordable because family incomes are stagnating, because rents are rising or some combination of the two. Research shows the crisis of housing affordability in most cities has been driven mostly by rising rents and home prices.[13]

- Housing affordability is a problem mostly concentrated among roughly half of Seattle households who are renters. And within renters, affordability is a critical issue mostly for poor and very poor families.

- How big is the affordability problem? Currently about 21,400 Seattle renters and 19,000 homeowners pay more than half their income in housing costs, or roughly 15 percent of the city's 284,000 households.[14] Well-designed affordable housing policy should target these households rather than Seattle renters and homeowners in general.

How Rental Markets Work

To understand how to design good affordable housing policy, it's important to understand the dynamics of Seattle's rental market.

- What we call the "housing market" is actually a hierarchy of smaller submarkets with varying rental quality. These range from high-end condominiums to low-end studio apartments.

- When new units are built, developers choose the quality and affordability that's most profitable to them. Once built, units suffer depreciation that lowers quality, and landlords can make new investments that raise quality (such as kitchen remodels, seismic retrofits, energy-efficient appliances, insulated windows and more). In this way, housing units shift among quality tiers over time through a process economists call "filtering."[15]

---

[13] Quigley and Raphael (2004).
[14] City of Seattle (2009). These figures exclude one-person student households.
[15] Early literature on this phenomenon of "filtering" dates back to Ratcliff (1949) and Sweeney (1974).

- All housing in Seattle is linked through the process of filtering. Luxury apartments from past decades often become today's affordable housing, as have many units in the lower Queen Anne neighborhood. Similarly, today's affordable housing may become tomorrow's premium units after investment by landlords—a process more commonly known as "gentrification"—as have many units in the Central District, the Chinatown/ID neighborhood and the Georgetown neighborhood.

- Because of filtering, the overall supply of affordable housing is determined by new construction at all levels of quality—not just newly built affordable housing—as well as the rate at which units filter up and down the quality ladder. Research shows the stock of affordable housing in cities is sensitive to construction of high-quality units, not just new affordable units.[16]

- Policies that limit the supply of higher-quality housing may raise rents in those markets. This can inadvertently affect the supply of lower-quality housing as well by giving landlords of affordable units an incentive to filter them up the quality ladder through investment.[17]

What Policies Hurt Affordability?

- Most economists believe the housing affordability crisis in U.S. cities has been caused by factors affecting urban housing supply.[18] What are those factors?

- A large number of studies have examined the impact of local regulations on affordability. These include local zoning laws, land-use regulations, open-space requirements, construction moratoriums, smart growth boundaries and a variety of other policies. While most Seattleites agree that these regulations are necessary and desirable, there is clear evidence that they reduce housing affordability. For example:

    - Mayer and Somerville (2000) find cities with heavily regulated housing markets have consistently lower levels of new housing construction.

    - Green, Malpezzi and Mayo (1999) find significantly lower housing supplies and higher prices in U.S. cities with stricter land-use regulations.

    - Studies such as Pollakowski and Wachter (1990), Malpezzi (1996), and Green (1999) find a clear relationship between the degree of land-use regulations and housing affordability.[19]

- The above studies point to a tradeoff. Regulations such as those requiring seismic retrofits or the use of fire-retardant materials are clearly desirable. But they are also costly. If poor families disproportionately bear the burden of Seattle's environmental and safety regulations through reduced housing affordability, an equitable solution may be direct compensation in the form of housing vouchers.

---

[16] Malpezzi and Green (1996).
[17] Somerville and Mayer (2003).
[18] Quigley and Raphael (2004).
[19] See Quigley and Raphael (2004) for an extensive review of these and similar studies.

- The City of Seattle currently operates a Rental Assistance Program funded by the 2009 Seattle Housing Levy and administered by the Seattle Office of Housing.[20] Experimental evidence from the Federal Experimental Housing Allowance Program (EHAP) in the 1970s and 1980s shows these types of housing vouchers can be effective without raising local rents if properly designed.[21]

- *Micro Housing and Affordability:* In recent months the Seattle City Council has considered limiting construction of new "micro" housing units—small, hostel-style apartments typically less than 200 square feet. Micro housing can help reduce demand for traditional studio and one-bedroom apartments, helping lower overall rents. Restrictions on new micro housing would clearly fall into the category of local housing regulations that hurt overall affordability. While the decision to allow micro housing involves complex zoning and safety issues, economic research suggests policies that restrict new micro housing would work against the broader goal of affordability in Seattle.

What Do We Know About Inclusionary Zoning Laws?

- Because local budgets are tight, many city officials have advocated the use of off-budget regulations to promote affordable housing. "Inclusionary zoning" that requires a fraction of new development be set aside for affordable housing has become popular throughout California and elsewhere in recent decades. In May 2013, Seattle passed an inclusionary zoning law to encourage affordable housing in the rapidly growing South Lake Union neighborhood.

"Affordable housing has become a critical issue facing many Seattle families."

- What does economic theory say about inclusionary zoning? According to standard theory the effects are similar to a tax on new housing construction. The costs will be divided among renters, landowners and construction firms. If costs are passed through to renters the result could be higher rents for high-quality units, encouraging "upward filtering" of existing affordable units. In this way, newly built affordable housing may be partially offset by reduced supply of existing affordable units elsewhere, undermining the goal of the policy.[22]

- What do empirical studies say about inclusionary zoning?

    - A comprehensive 2010 literature review found California's inclusionary zoning laws have had some—but not all—the effects predicted by economic theory.[23] The laws shift the mix of housing toward multifamily over single-family housing. As predicted by theory, rents at the upper-end of the market increased. According to the authors, "builders express concern that aggressive BMR ["below market rate"] programs might slow recovery in the residential construction sector" following recessions.

[20] Seattle Office of Housing, "2009 Seattle Housing Levy: 2012 Report of Accomplishments" at www.seattle.gov/housing/levy/docs/SeattleHousingLevy_Report_2012.pdf.
[21] Quigley and Raphael (2004).
[22] Knaap et al. (2008).
[23] Kroll et al. (2010).

However, they found no evidence that inclusionary zoning slows new housing construction overall.

  - From a 2011 study of inclusionary zoning laws in San Francisco and Boston: "[T]he amount of affordable housing produced under IZ ["incentive zoning"] has been modest and depends primarily on how long IZ has been in place. Results from suburban Boston suggest that IZ has contributed to increased housing prices and lower rates of production during periods of regional house price appreciation."[24] Some cities have produced thousands of new affordable units through incentive zoning, while others have seen little or none.[25]

  - A 2008 study of 369 municipalities in California found some undesirable side-effects of inclusionary zoning laws on local housing markets.[26] The authors found in cities that adopted inclusionary zoning "the share of multifamily housing increases; the price of single family houses increases; and the size of single family houses decreases. These results are fully consistent with economic theory and demonstrate that inclusionary zoning policies do not come without cost."

- Overall, research shows inclusionary zoning can produce new affordable housing in Seattle at little budgetary cost in the short term. However, these policies may also have negative long-term effects on the local housing market. Studies show inclusionary zoning laws alone have not alleviated affordability problems in U.S. cities that have adopted them. Instead, they must be accompanied by broader policies that (1) stimulate overall housing production at all levels of quality; and (2) directly offer assistance to very low-income renters.

[24] Schuetz et al. (2011).
[25] Furman Center (2008).
[26] Knaap et al. (2008).

III. What Works in Local Economic Development?

Local economic development includes city policies aimed at attracting new jobs, businesses and investment to Seattle. These include business tax incentives, subsidized small-business loans, start-up incubators and more. There are a large number of academic studies examining these policies for what works—and what doesn't work—in local economic development.[27]

Focusing on the Right Goals

- The main goal of local development policy should be raising real per-capita income of Seattle residents.[28] Other secondary goals like number of jobs, growth rates or number of companies can be misleading—they don't tell us the quality of the jobs being created, whether prosperity is being widely shared or not, or whether Seattle residents or non-resident commuters are being hired by the new companies.

- Once our goal is raising incomes for Seattle residents, it's clear that local development policy is really just local labor market policy, since that's where most Seattleites earn income. That means economic development policy should either target (1) the demand for labor through policies that encourage companies to add jobs and pay higher wages; or (2) the supply of labor through policies that improve workers' skills and education.[29]

Business Incentives: Policies that Encourage Labor Demand

- Policies that encourage more and better jobs in Seattle fall into three broad categories: (1) they can try to attract outside companies to Seattle; (2) they can try to retain and expand existing Seattle companies; or (3) they can encourage new business formation and entrepreneurship in Seattle.

- As a general rule, business incentives should always target companies in the city's so-called "export base." These are companies that earn most revenue from customers outside Seattle. This includes exporters that sell goods to nearby cities and states, and tourism-related businesses that bring in dollars from non-residents. Promoting these firms helps pull in new economic activity from outside the city, rather than simply reshuffling existing activity among firms.[30] Seattle's scenic location and cultural amenities present many opportunities for raising local incomes by doing a better job promoting tourism and international trade.

---

[27] For an extensive survey of research on local economic development policy, see Timothy Bartik (2009), "What Works in State Economic Development?" in *Growing the State Economy: Evidence-Based Policy Options* by Stephanie Eddy and Karen Bogenschneider, editors. Madison, WI: University of Wisconsin, pages 15-29.
[28] Many economists argue policies should target *median* real per capita household income as an indicator of the welfare of middle-class Seattle families, as opposed to *mean* income which is sensitive to growth in very high-income households.
[29] This section draws heavily from Bartik (2009).
[30] Bartik (2003).

- Well designed business incentives should have all or some of these characteristics: they should target companies that pay above-average wages, require employers to show new jobs were actually created, have "claw back" provisions if companies fail to deliver, undergo rigorous studies to assess their effectiveness compared to a world without those incentives, and encourage businesses to hire local Seattle residents rather than non-resident commuters.

- *Business Tax Incentives:* A common but expensive policy is business tax cuts for companies that promise to relocate or expand in Seattle. Most research shows a 10 percent cut in local business taxes increases economic activity and employment by about 2-3 percent.[31] While that might be an important boost to the economy, it comes at a staggering cost of about $7,000 per new job in lost tax dollars.

- *Job Training:* A much more effective strategy is customized job training that matches Seattle companies with custom-trained workers. This is typically done through local community colleges and similar programs are already in place at the Seattle Community Colleges. Research has shown custom job training is an effective local development tool, and can be 10 to 15 times more effective per dollar at raising local incomes than business tax incentives.[32]

"Customized job training through community colleges is an effective jobs policy."

- *Information and Advice:* Another cost-effective strategy is offering "extension services" to companies. These programs provide information and advice to small- and medium-sized Seattle companies to help them find new markets, learn about taxes and regulations, and connect with local academics and consultants who can help with product design and business productivity. Studies show these services significantly boost business sales, cut operating costs and improve productivity at relatively little cost to taxpayers.[33]

- *Encouraging Entrepreneurship:* A final strategy is to encourage entrepreneurship and small-business formation in Seattle. Research has shown these policies can be very effective at raising local incomes. Programs that teach business planning and marketing—particular to women, minority and low-income entrepreneurs—have been shown to increase start-ups.[34] Additionally, business incubators that provide free or subsidized equipment and office space for start-ups have been effective in many cities.[35] The UW's Center for Commercialization New Ventures Facility which opened in 2012 is an excellent local example.[36]

[31] Bartik (1992) and Wasylenko (1997).
[32] Hollenbeck (2008); Hoyt et al. (2008); and Osterman and Batt (1993).
[33] U.S. Department of Commerce (2002); and Oldsman and Russell (1999).
[34] Benus et al. (1994).
[35] Molnar et al. (1997).
[36] More information about the UW facility is available online at depts.washington.edu/uwc4c/news-events/uw-launches-technology-start-up-incubator-aims-to-double-start-ups-over-three-years/.

Worker Incentives: Policies that Improve Labor Supply

- Policies to improve worker skills and education—what economists call "human capital"—in Seattle fall into two broad categories: (1) they can encourage workers to seek training and improve job skills; or (2) they can promote long-term success through early childhood health and education.

- *Customized Job Training:* Community colleges can play a pivotal role in raising Seattle incomes by improving the skills of our workforce. Research shows targeted job training that connects specific employers with specific workers who've received customized job training works much better than general training. Some studies have found customized job training can increase the present value of local per capita income by $30 for each dollar spent, more than 10 times the payoff of general business tax incentives.[37] One example regarded as a model by many researchers is the customized training program developed by the North Carolina Community College system.[38]

"Early childhood education can be a surprisingly powerful tool for economic development."

- *Early Childhood Programs:* Early childhood education and health programs are surprisingly powerful economic development tools. Though most people do not think of universal preschool as an economic development policy, there have been a large number of high-quality studies using randomized controlled trials showing these programs boost wages, employment and educational attainment decades later in life. Children helped by these programs today become higher-earning Seattle residents in the future. Studies estimate programs such as universal preschool and prenatal nurse visits can increase the present value of local incomes by 2-3 times the cost of the program.[39] A variety of examples of successful local early childhood programs are discussed in Bartik (2008).

- *General Lessons:* Finally, a general lesson for development incentives is that they are most effective when targeting people and businesses in the stage of their lifecycle that's most responsive to intervention. For companies, research suggests new start-ups and small companies face informational and financial hurdles that city-level programs can help overcome. For workers, early-age interventions are generally most powerful as they reach individuals when they're most malleable. Later-stage interventions may still have important effects, but are generally more costly and less effective than youth-focused programs.

---

[37] Osterman and Batt (1993); and Bartik (2011).

[38] More information about the North Carolina Community College program is available at www.nccommunitycolleges.edu/Business_and_Industry/CustomizedTraining.htm.

[39] See Bartik (2008) for a detailed evaluation of the economic effects of early childhood education. As examples of exemplary programs he suggests "the Perry Preschool Project, the Chicago Child-Parent Center Program for preschoolers and early elementary school students, the Abecedarian full-time child care and preschool program from birth to age 5, and the Nurse Family Partnership program, that provides nurse home visits to needy first-time mothers from the prenatal period to age 2."

References

Transportation

Aschauer, A.D. (1989). "Is public expenditure productive?," *Journal of Monetary Econ.*, 23(2), pp. 177-200.

Aschauer, A.D. (1991). "Transportation spending and economic growth," Amer. Public Trans. Assoc.

Babcock, M.W., M.J. Emerson, and M. Prater. (1997). "A model procedure for estimating economic impacts of alternative types of highway improvement," *Transportation Journal*, 36(4), pp. 30-43.

Bhata, Saurav Dev and Matthew P. Drennan. (2003). "The Economic Benefits of Public Investment in Transportation: A Review of Recent Literature," *Journal of Planning, Educ. and Research*, 88, pp. 288-296.

Duffy-Deno, K. T., and R. W. Eberts. (1991). "Public infrastructure and regional economic development: A simultaneous equations approach," *Journal of Urban Economics*, 30, pp. 329-43.

Forkenbrock, D.J. and N.S.J. Foster. (1990). "Economic benefits of a corridor highway investment," *Transportation Research* 24A (4), 303-312.

Gramlich, E. (1994). "Infrastructure investment: A review essay," *Journal of Econ. Lit.*, 32, pp. 1176-96.

Metrolinx (2013). "Big Move Implementation Economics: Revenue Tool Profiles," report prepared by AECOM and KPMG for Ontario Canada's Metrolinx transportation authority. Available at www.bigmove.ca/wp-content/uploads/2013/05/AECOM-KPMG-Big-Move-Implementation-Economics-Revenue-Tool-Profiles.pdf.

Nadiri, M. I., and T. P. Mamuneas. (1994). "The effects of public infrastructure and R&D capital on the cost structure and performance of U.S. manufacturing industries," *Review of Econ. & Stat.*, 76, pp. 22-37.

Ozbay, K., D. Ozmen-Ertekin, and J. Berechman. (2003). "Empirical analysis of the relationship between accessibility and economic development," *Journal of Urban Planning and Dev*., 129(2), pp. 97-119.

Ozbay, K., D. Ozmen-Ertekin, and J. Berechman. (2006). "Modeling and analysis of the link between accessibility and employment growth," *Journal of Transportation Engineering*, 132(5), pp. 385-393.

Ozbay, K., D. Ozmen-Ertekin, and J. Berechman. (2007). "Contribution of transportation investment to county output," *Transport Policy*, 14, pp. 317-329.

RESI. (1998). "Economic impact evaluation of the state highway system in Maryland." Towson, MD: Research Institute of Towson University.

Tomer, Adie. (2012). "Where the Jobs Are: Employer Access to Labor by Transit," Metropolitan Policy Program at the Brooking Institution (July 2012). Available at www.brookings.edu/~/media/Research/Files/Papers/2012/7/transit%20labor%20tomer/11%20transit%20labor%20tomer%20full%20paper.pdf.

Affordable Housing

City of Seattle (2009). "2009-2012 Consolidated Plan for Housing and Community Development," Seattle Human Services Department (Section 3: Needs Assessment). Available at www.seattle.gov/humanservices/.

Furman Center for Real Estate and Urban Policy (2008). "The Effects of Inclusionary Zoning on Local Housing Markets: Lessons from the San Francisco, Washington DC and Suburban Boston Areas," Center for Housing Policy brief. Available at http://www.nhc.org/media/documents/IZ_in_SF,_DC,_Boston.pdf.

Green, Richard K. (1999). "Land Use Regulation and the Price of Housing in a Suburban Wisconsin County," *Journal of Housing Economics*, 8(2), pp. 144-59.

Green, Richard K., Stephen Malpezzi, and Stephen K. Mayo. (1999). "Metropolitan Specific Estimates of the Price Elasticity of Supply of Housing, and Their Sources," University of Wisconsin, Madison Center for Urban Land Economics Research working paper.

Knaap, Gerrit-Jan, Antonio Bento and Scott Lowe (2008). "Housing Market Impacts of Inclusionary Zoning," National Center for Smart Growth Research and Education working paper. Available at http://smartgrowth.umd.edu/housingmarketimpactsofiz.html.

Kroll, Cynthia A., Christina Mun, Larry Rosenthal, and Vishali Singal. (2010). "Below Market Rate Requirements in a Down Market: What Have We Learned From The Great Recession?," Fisher Center for Real Estate and Urban Economics and Berkeley Program on Housing & Urban Policy working paper.

Malpezzi, Stephen. (1996). "Housing Prices, Externalities, and Regulation in U.S. Metropolitan Areas," *Journal of Housing Research*. 7(2), pp. 209-41.

Malpezzi, Stephen, and Richard K. Green. (1996). "What Has Happened to the Bottom of the U.S. Housing Market?" *Urban Studies*, 33(10), pp. 1807-820.

Mayer, Christopher J. and C. Tsuriel Somerville. (2000). "Land Use Regulation and New Construction," *Regional Science and Urban Economics*, 30(6), pp. 639-62.

Pollakowski, Henry O. and Susan M. Wachter. (1990). "The Effects of Land-Use Constraints on Housing Prices," *Land Economics*, 66(3), pp. 315-24.

Quigley, J.M. and S. Raphael. (2004). "Is Housing Unaffordable? Why Isn't It More Affordable?" *Journal of Economic Perspectives*, 18(1), pp. 191-214.

Ratcliff, Richard U. (1949). "Filtering Concept," in *Urban Land Economics*. New York: McGraw-Hill.

Schill, M.H. (2004). "Regulations and Housing Development: What We Know," *Cityscape*, 8(1), in *Regulatory Barriers to Affordable Housing* (2005), pp. 5 19. Washington, D.C.: U.S. Department of Housing and Urban Development.

Schuetz, Jenny, Rachel Meltzer, and Vicki Been. (2011). "Silver Bullet or Trojan Horse? The Effects of Inclusionary Zoning on Local Housing Markets in the United States," *Urban Studies*, 48(2), pp. 297–329.

Somerville, C. Tsuriel, and Christopher J. Mayer. (2003). "Government Regulation and Changes in the Affordable Housing Stock," Federal Reserve Bank of N.Y. Economic Policy Review, (June), pp. 45-62.

Sweeney, James L. (1974). "Quality, Commodity Hierarchies, and Housing Markets." *Econometrica*, 49, pp. 147-67.

Local Economic Development

Bartik, Timothy. (1992). "The effects of state and local taxes on economic development: A review of recent research," *Economic Development Quarterly*, 6(1), pp. 102-110.

Bartik, Timothy. (2001). *Jobs for the poor: Can labor demand policies help?*. New York and Kalamazoo, MI: Russell Sage Foundation and W.E. Upjohn Institute for Employment Research.

Bartik, Timothy. (2008). "The economic development effects of early childhood programs," Report for the Pew Charitable Trusts and Upjohn Institute Report.

Bartik, Timothy. (2009). "What Works in State Economic Development?" in *Growing the State Economy: Evidence-Based Policy Options,* edited by Stephanie Eddy and Karen Bogenschneider. Madison, WI: University of Wisconsin, pp. 15-29.

Benus, J. M., M. Wood, and N. Grover. (1994). "A comparative analysis of the Washington and Massachusetts UI self-employment demonstrations," Report for U.S. Dept. of Labor by ABT Associates.

Wasylenko, M. (1997). *Local economic development: A primer*. Washington, DC: World Bank. Available at www.worldbank.org/urban/led.

Hollenbeck, K. (2008). "Is there a role for public support of incumbent worker on-the-job training?" Upjohn Institute Working Paper No. 08-138.

Hoyt, W.H., C. Jepsen, and K.R. Troske. (2008). "Business incentives and employment: What incentives work and where?" University of Kentucky Working Paper.

Molnar, L., et *al.* (1997). *Impact of business incubator investments.* Athens, OH and Ann Arbor, MI: National Business Incubation Association and University of Michigan.

Osterman, P., and R. Batt. (1993). "Employer-centered training for international competitiveness: Lessons from state programs," *Journal of Policy Analysis and Management*, 12(3), 456-477.

U.S. Department of Commerce. (2002). *The manufacturing extension partnership: Delivering measurable returns to its clients*. Washington, DC: National Institute of Standards and Technology.

Oldsman, E., and J. Russell. (1999). "The industrial resource center program: Assessing the record and charting the future," Report prepared for the State of Pennsylvania.