POLICY brief

Washington Research Council

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Housing Supply:
The Quiet Job Killer

BRIEFLY

State and local governments in Washington are undertaking aggressive economic development programs designed to create jobs for people in a wide range of skill levels. A lack of land capacity in urban areas hampers these efforts, however. Land use policies have to recognize that the opportunity for middle income jobs depends on the availability of middle income housing.

GIVE'EM SHELTER

A five-part series examining the availability and affordability of housing in Washington State.

Part 3

Month after month, the headlines tell the same story: housing prices up at double-digit rates – again. The news stories that follow the monthly release of prices and sales data by the Northwest Multiple Listing service nearly always point to some factor driving demand – low interest rates, a hot economy, speculation – but they rarely talk about the other side of the equation: supply.

Housing provides an excellent illustration of the laws of supply and demand. Housing markets are fragmented and competitive, with many buyers and sellers and nearly perfect information. The creation of households follows predictable patterns, and each household needs just one housing unit. The economics of housing should be easy to understand. So why is there just a collective shrug when the monthly statistics show that another segment of the population has been priced out of the market?

This brief takes a look at the demand and supply dynamics of the housing market, showing what happens when supply does not respond adequately to signals from the demand side. When major price increases do not bring a rush of new supply to the market, something is wrong, and when markets as important as housing do not function smoothly, the consequences can be severe.

State and local governments in Washington are undertaking aggressive economic development programs designed to create jobs for people in a wide range of skill levels, but this effort will be severely hampered by high housing prices and a lack of new housing supply.

THE ROLE OF SUPPLY AND DEMAND IN A HOT HOUSING MARKET

In a well-functioning housing market the median price for a house should fall somewhere near the level that a buyer with the median income can afford. If prices are too low, resellers pull homes off the market and builders stop building, creating shortages that drive prices back up. If prices are too high, owners of existing homes cash in and builders ramp up production, adding supply and bringing prices down. This simple dynamic assumes, of course, that markets are open and fluid.

To figure out the degree to which rising prices can be attributed to shifts in supply or demand, we need to look at the factors that drive each.

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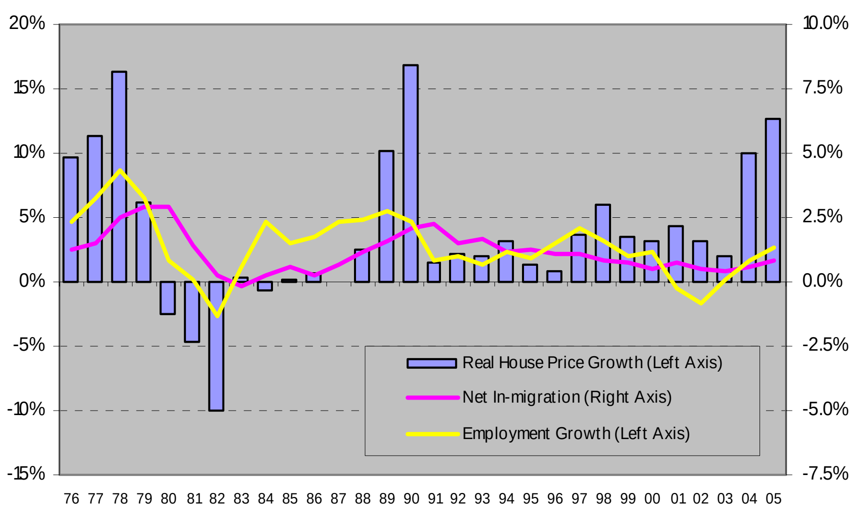
In search of a "demand shock"

In the short run, housing markets are driven primarily by demand. While an ample and affordable housing supply may attract growth over time, in the near term, home prices and building activity responds to identified demand. “Build it and they will come” does not work for the individual home-builder. Before undertaking projects, builders and developers look at a number of factors that determine future housing needs. These factors can provide an indication if there is an abnormally high level of demand for housing in Washington.

***Job and population growth*.** A good place to start looking for clues to demand increases is in population growth: every new household needs a housing unit (the complex relationship between population growth and housing growth will be discussed in more detail below). Population growth has two major components: natural growth and migration. Natural population growth is the excess of births over deaths, and tends to be stable over time. Net in-migration – the number of people moving into the area minus the number of people moving out – varies considerably, even over short periods of time, and is closely tied to expansions and contractions in the state economy.

Chart 1 shows the net rate of in-migration to the state (net in-migration divided by population), the rate of growth in non-farm employment and the rate of growth in the average house price (adjusted for inflation as measured by the personal consumption expenditure deflator) in Washington for the past 30 years. Several things are worth noting. First, the cycle in employment leads the cycle in in-migration. Thus, it is employment growth that drives population growth. Second, years with strong employment growth tend to be years with strong housing prices.

Chart 1: Employment, In-migration and House Prices in Washington State



Sources: Bureau of Labor Statistics, Office of Financial Management , Freddie Mac, Bureau of Economic Analysis

Job growth was less robust in the late 1990s than in either the late 1970s or late 1980s, and house price growth was correspondingly less robust then. While job growth following the 2001 recession has been weaker than following either the 1982 or 1991 recessions, the growth in housing prices, surprisingly, has been stronger. And 2004 and 2005 rank in the top 6 of the 30 years.

Interest rates. Historically low mortgage interest rates are frequently cited as a major contributor to housing demand, and there is no question that they have been a factor. Rates, however, hit bottom in mid-2003 and held relatively stable until their recent rise. Falling rates in 2001 and 2002, which increased purchasing power and allowed more buyers to enter the market at the low end, can explain the growth in prices for 2001, 2002 and 2003, but not for 2004 and 2005.

Further evidence that interest rates are not the cause of recent increases in housing prices comes from data on the share of home loans that are “interest only.” Nationally, in the first six months of 2005, 28.5 percent of home loans were interest only. For Washington the figure was 38.6 percent, ranking 8th highest among the states. For the Seattle-Bellevue-Everett metro area, 45.1 percent of home loans were interest only, 13th highest amongst metro areas; for the Tacoma area, 44.6 percent were interest only, 14th highest (LoanPerformance 2005). Even at the current low interest rates, housing prices strain household budgets.

Speculation. For the past year or so, observers of the economy have been using the "B" word: bubble. There is growing concern that housing prices are being driven by speculative investment, rather than any rational sense of value in residential real estate. This talk is fueled by concern about the array of new financing tools (including interest only loans) available that allow homebuyers to take on more debt than they could under conventional financing.

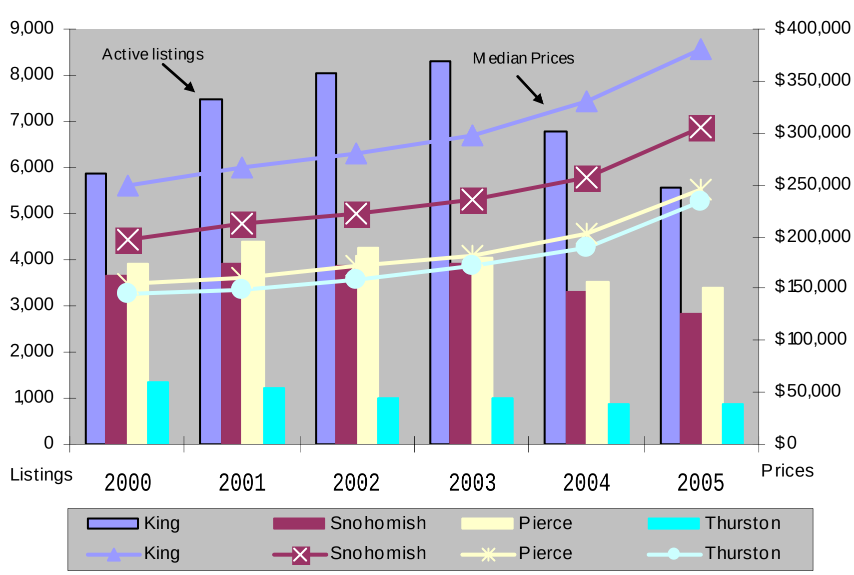
So, is it possible to identify an excessive amount of demand in the housing market? Or, more precisely, has there been a "demand shock" that cannot be satisfied with new supply from a normally-functioning housing market? Favorable mortgage products and some speculative activity have likely pushed demand higher than it would be under the current slack job and population growth. But there is no sign of the sort of shock that happened in the late 1980s, when Boeing ramped up production and brought thousands of families to the Puget Sound region in a matter of months, just as the rest of the economy was heating up.

Supply: cruising along in second gear

Skyrocketing prices, multiple offers and bidding wars are expected during times of rapid job and population growth, but why are they happening during the relative demographic calm of the past few years? Why can the housing industry not keep up?

A place to start on the supply side is the inventory of detached houses on the market. The Northwest Multiple Listing Service reports monthly on the number of homes listed for sale by real estate brokers in most counties of Western Washington. This data includes nearly all re-sale homes (except those being sold by the owner) and some new construction homes (many new homes are pre-sold and never get listed).

Chart 2: Listings and Prices in 3rd Quarter

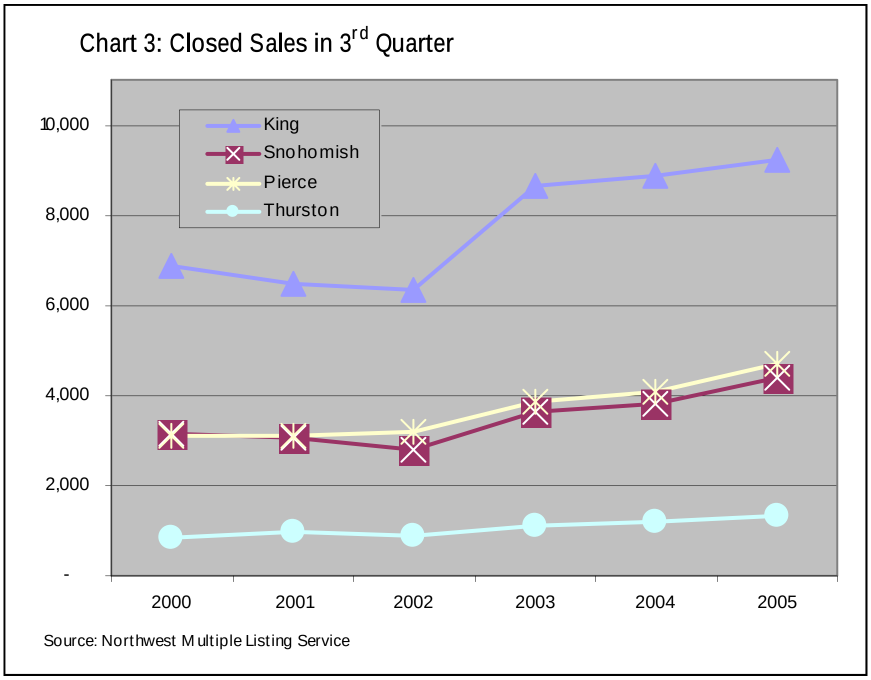


Source: Northwest Multiple Listing Service

Chart 2 shows trends for four large Puget Sound area counties, which make up about three fourths of sales in Western Washington. The bars show active listings, and the lines show median prices for each county. Note that inventory strengthened as prices rose through 2001 and then began to fall in three of the counties while prices increased even faster. (King County had another two years of build-up, but then inventory fell even more sharply.)

Also of note in this data is the trend in Thurston County. Previously an affordable area, median prices have shot up from $144,000 in 2000 to

$233,000 in 2005. This 11 percent annual increase is widely attributed to the spillover effect of the 10 percent annual price increases in Pierce County. Clearly, scarce inventory and rising prices continue to chase buyers up and down the Interstate 5 corridor in search of affordability.

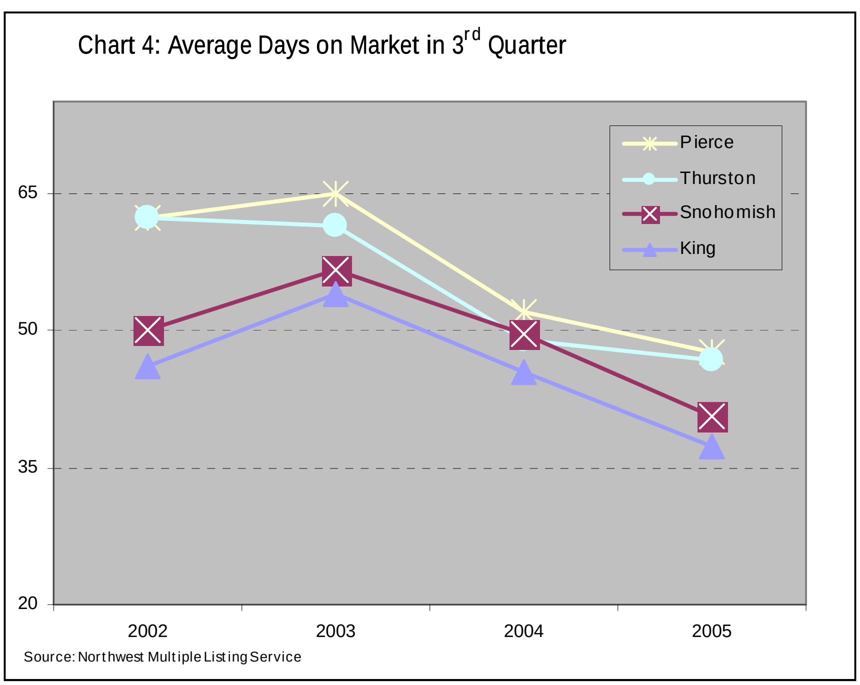


The lack of active listings, or inventory, does not mean there is a lack of sales. In all four counties, sales have increased even in the face of declining inventory. Chart 3 shows closed sales for the four counties during the third quarter, which is traditionally the highest sales period for residential real estate. The reason this can happen is that homes are being sold much faster, and therefore staying on the market as listings for a shorter time. Chart 4 shows that the time on market has dropped steadily over the past few years.

All this data – rising prices and sales, falling inventory and time on market – point to one inevitable conclusion: a shortage of housing on the market. Even with job growth and in-migration at relatively low levels, the behavior of the market indicates a shortage of houses.

Implications

Both the supply and demand curves for houses are quite steep, or inelastic. An inelastic supply means that it takes a substantial price increase to get more inventory on the market through new construction. While new construction has picked up in many areas, it is still not on a substantially higher pace than in the past 10 to 20 years. Restrictions on the availability of land to build detached housing also hampers the ability of the homebuilding industry to expand its capacity.

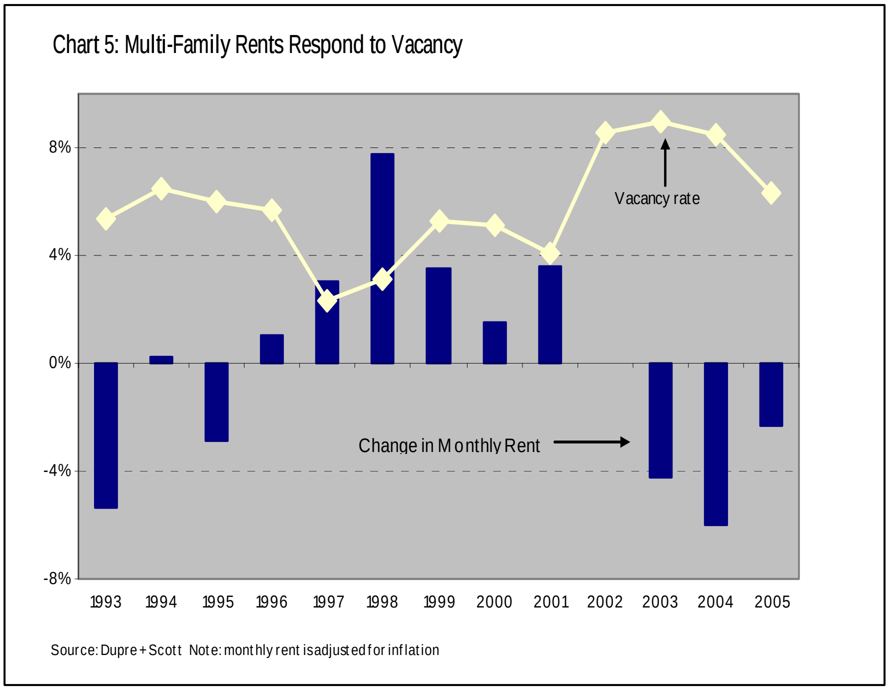


Inelastic demand means that rising prices do not deter many buyers. A sense of urgency and some tricky mortgage tools can induce buyers to chase higher and higher prices. Strong sales in the face of double-digit price increases indicates that buyers feel housing is a good investment, even at higher prices.

The price increases of the past several years are due to demand that is both increasing slightly and inelastic, and a supply that is both stalled, and inelastic. Thus, a relatively small shift in the demand curve results in substantial increases in prices.

THE EXCEPTION: RENTAL APARTMENTS

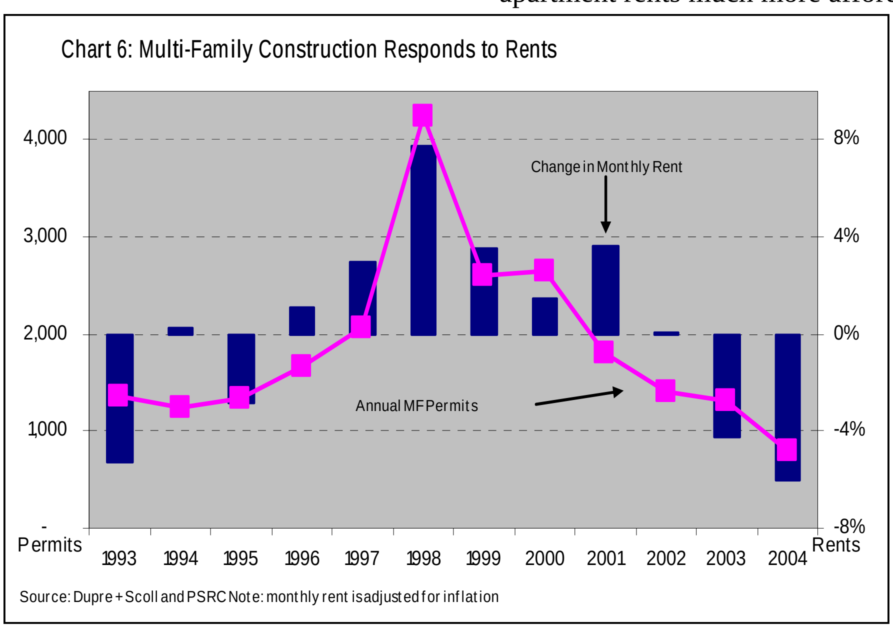
While supply seems to have a difficult time catching up to demand in the for-sale market, the situation is quite different in the apartment rental market. Charts 5 and 6 use Snohomish County as an example, although patterns similar to those seen in Snohomish County have occurred in other counties in the state.



In the apartment market, rents consistently respond inversely to vacancy rates: high vacancies produce flat or falling rents, and low vacancies produce rising rents. Chart 5 shows that when vacancies get much above or below four percent, rents can adjust dramatically.

Construction of apartment buildings tracks rents, with rising rents leading to new buildings, and falling rents slowing down the pace of construction. Chart 6 shows that permitting activity tracks the rate at which rents are changing. (Note: the data on multi-family housing permits includes condominiums. Although problems with construction liability have dramatically reduced condominium construction in moderate-priced markets like Snohomish County, the data should still be considered just an approximation of apartment construction.)

In the short term, both supply and demand for apartments are relatively inelastic, which is why rents can rise and fall dramatically when the market is out of equilibrium. But unlike the detached housing market, new supply tends to flood the market at regular intervals, keeping apartment rents much more affordable than owner-occupied houses. An apartment building boom in Western Washington in the late 1990s led to the high vacancy rates and falling rents that tenants have benefited from and investors have suffered from during the past several years.



The relative ease of building apartments, as compared to building detached housing or condominiums, will hamper efforts to raise the rate of home ownership. Statewide, the home ownership rate in 2000 was over 64 percent. In contrast, the state's larger cities have lower rates, with Seattle at 48 percent, Tacoma at 54 percent and Vancouver and Yakima at 53 percent. The trend away from ownership is moving out to suburban areas, as apartment construction proves easier than production of for-sale housing. The home ownership rate is just 54 percent in Redmond and 53 percent in Lynwood. If this trend continues, one effect of the GMA policy of promoting development within cities could be a lower rate of home ownership.

IT ALL BEGINS WITH LAND

The most fundamental raw ingredient of homebuilding is land. Or, more precisely, land that is properly zoned and is served by basic infrastructure. The price and availability of land, and the time and cost of turning it into fully-serviced building lots or multi-family sites, is the starting point for any discussion of housing supply and affordability.

The general rule that a new house is priced at a multiple (usually between three and four times) of the cost of the finished lot still holds. Finished lot costs have risen dramatically in many areas of the state, pushing new home costs up as well. Some of the increase in lot costs can be attributed to new stormwater requirements and more elaborate streets, but most of the cost increase comes from the rising price of land.

In the urban areas of the state growth boundaries have placed a limit on the supply of land available for building houses. Depending on how tight it has been set, this limit can have a major impact on land prices.

The building industry finds it cheaper to develop open land on the periphery, so the only way to get the industry to shift to infill sites is to restrict the supply of land below the level that could be absorbed on the periphery. Higher prices of land on the periphery make infill land, which tends to be more expensive to buy and develop, attractive.

In some counties there has been very little infill development, indicating that land on the periphery is still available and attractively priced. In other areas, King and Snohomish counties in particular, but increasingly in Pierce and Thurston counties, land prices on the periphery have risen substantially. This has the intended effect of promoting infill development, but also has the inevitable effect of cutting back on new home construction and driving up new home prices.

Holding land prices down in the face of continuing increases in demand requires increasing the supply of building sites. This can be done in one of two ways: by removing regulatory barriers to density that restrict the capacity of land within the current growth boundary or by moving the urban growth boundary itself.

In the high-demand areas of the state, the one bright spot in land supply has been the masterplanned communities. In these developments the original land cost was very low, and masterplanning has allowed much higher densities than the peripheral areas normally permit. Thus, low lot cost and economies of scale have allowed much more affordability in masterplanned communities than in the surrounding subdivisions.

A housing supply that is both inelastic and incapable of expanding its productive capacity to meet the demands of growth is nothing new or unusual. But it does not have to be that way. Fast growing areas can provide enough housing to keep prices down. For example, while the Puget Sound region’s population grew by 5.6 percent from 2000 to 2005, the Atlanta region grew by 11.2 percent, exactly twice as fast. During this same time, housing prices increased by 49 to 64 percent in the Puget Sound area, while prices grew by only 30 percent in the Atlanta area (Atlanta Regional Commission, Puget Sound Regional Council, Freddie Mac).

So what accounts for the difference between Atlanta and Puget Sound, such that Atlanta can grow twice as fast, but have housing prices increase no more than inflation, while Puget Sound area prices go up over 50 percent? A pair of economists, one from Harvard, the other from the Wharton School at the University of Pennsylvania, asked that question and concluded:

> America is not facing a nationwide affordable housing crisis. In most of the country, home prices appear to be fairly close to the physical cost of construction. . . . The bulk of the evidence marshaled in this paper suggests that zoning, and other land use controls, are more responsible for high prices where we see them. . . . Measures of zoning strictness are highly correlated with high prices. (Glaeser and Gyourko 2003)

The difference between the Atlanta and Puget Sound regions, then, should be found in the varying availability of land zoned for homebuilding. The Atlanta region has few regulatory or natural restrictions on the spread of urbanized development outward from the central city, and as a result, there is a near limitless supply of land on the ever-expanding periphery of Atlanta. The price of land, therefore, stays low.

Clearly Washington's Growth Management Act and the urban growth lines it calls for are a reaction to the unchecked spread of urban growth seen in places like Atlanta. But there should be no mistaking the choice that has been made: restrictions on land availability drive up prices of single family homes. There remains substantial inelastic demand for detached housing, and restrictions on supply, however well-intentioned, have resulted in rapid price increases.

HOUSING SUPPLY, POPULATION GROWTH AND JOB GROWTH: WHAT DRIVES WHAT?

The degree to which metropolitan areas grow or shrink is usually thought to be a function of jobs. Areas with expanding employment should see population growth, and areas with stagnant or shrinking job bases should see population decline. This thinking, however, ignores one critical factor: housing. Regions cannot grow if there is no place for people to live, and places tend not to shrink if housing is widely available. So, what is the relationship between housing and population growth?

This question is particularly important in light of Washington's Growth Management Act. The GMA keys its policies to population growth, with all jurisdictions required to "accommodate" a number of people that the Office of Financial Management projects will want to live in that jurisdiction. This approach raises the question of how we would know if the projections are wrong. By definition, growth cannot exceed the number of people accommodated. There is no way to know how many people would have lived in a jurisdiction but could not because housing was not available or affordable.

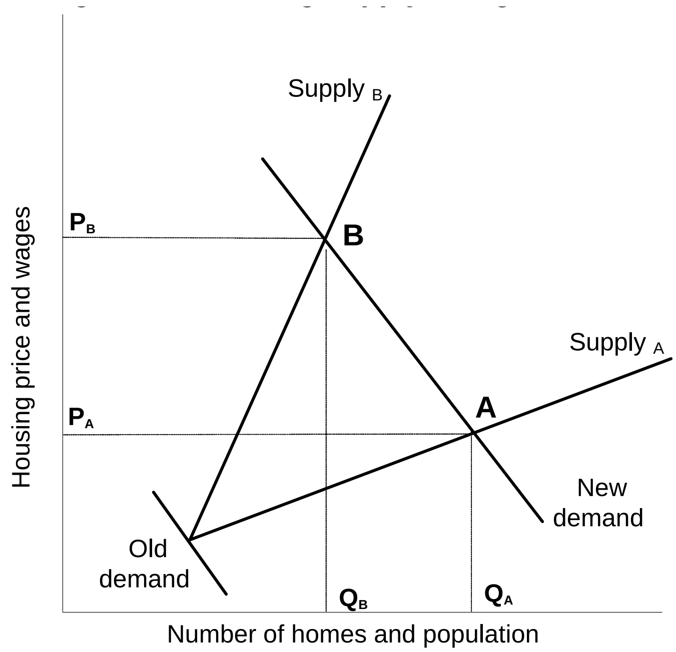
In effect, growth projections can become a self-fulfilling prophesy. The projected population growth becomes the accommodated population growth, which, in turn, becomes the maximum actual growth. If these rigid projections are built into local land use policies, there may be little room for supply to expand in order to meet a sudden demand shock.

The previous brief in this series noted that several counties that underwent the Buildable Lands process found that they had just barely enough land to accommodate their OFM population projections. In these cases there is little slack in the supply to absorb a demand shock.

If we are heading toward a collision of economic growth and housing supply, what will happen when housing cannot keep up with a hot economy? The same two economists who asked why housing prices go up in some areas and not others, explored this question. In a paper from the Harvard Institute of Economic Research, Glaeser, Gyourko and Saks (2005) explored how the housing supply of an urban area interacts with population and economic growth. The key, they found, was in the elasticity of the housing supply, or the degree to which new housing can be built economically in response to growth in demand. Chart 7 shows the impacts of an elastic or inelastic housing supply. In the case of "supply A," economic growth along with an elastic housing supply leads to population growth and a slight increase in wages and housing prices. In contrast, "supply B" shows economic growth along with an inelastic housing supply, which leads to less population growth, higher wages and higher housing prices.

The important point of this research is that a lack of housing growth will not bring economic growth to a halt. But it will have a powerful impact on who benefits from that growth and who suffers from it. If an inadequate housing supply drives up wages and housing prices and lowers population growth this will have significant consequences for individuals, businesses and the economy as a whole.

Chart 7: Housing Supply and Growth

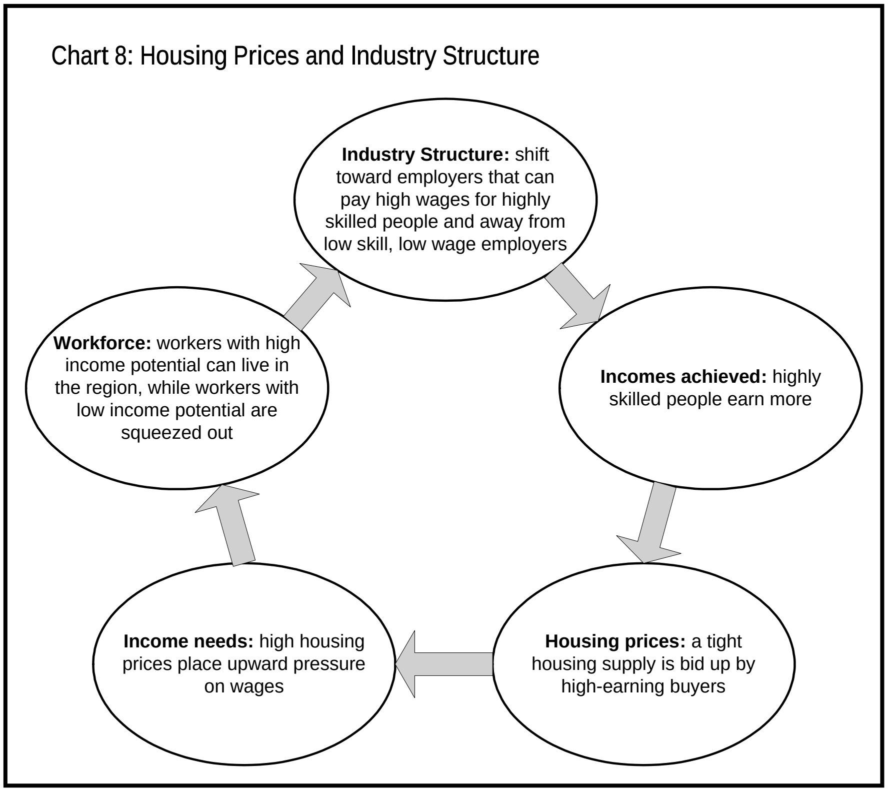


The impact of a demand shock that shifts the demand curve from "old demand" to "new demand" will vary depending on the elasticity of the supply curve. With an elastic curve like Supply $_A$, the result, point **A**, will be substantial new housing supply and population, with modest gains in wages and housing prices. An inelastic supply, such as Supply $_B$, will result in point **B**, with higher wages and prices, fewer new housing units and less population gain.

(Source: Glaeser, Gyourko, Saks, 2005)

Higher wages will offset the higher prices for some individuals, so real wages may not rise at all. Other individuals, those who work for employers that do not have the flexibility to raise wages to meet high housing costs, will see a decline in real wages due to high housing costs. In a high housing cost environment, software engineers may be able to negotiate higher salaries to cover high housing costs, while teachers, whose salaries are constrained by public budgets, cannot get the same salary increase.

For businesses, the lower population growth associated with a tight housing supply means fewer potential workers. Current residents may be priced out of the housing market and leave for lower cost areas, and potential in-migrants will be scared off by high housing prices. Ultimately, the only people who can afford the high housing prices will be those with high skills working in highly productive industries. Over time this will squeeze out employers that cannot, for competitive reasons, pay higher wages, resulting in fewer jobs for moderately-skilled people, and a job market that seeks high skills.



In today's job market, employers fill more and more high skill positions through national and international recruiting, leading to a truly ironic outcome: when growth management creates a tight housing supply, it promotes in-migration. In trying to manage growth, we may be punishing the modestly-skilled people who already live here and favoring the highly skilled people who move here. Chart 8 shows this cycle by which housing prices gradually determine industry structure and employment.

This process leads to the familiar problem of low and moderate wage service workers not being able to live in the areas where they work. The most extreme example of this is ski resorts, where the wealthy live in million dollar homes in the city, and the restaurant employees and ski lift operators must commute long distances. The same dynamic can happen in metropolitan areas where service workers must commute long distances, and service jobs go unfilled because people who would accept those jobs have been driven out of the area by high housing prices.

CONCLUSION: IS THIS THE STATE WE WANT?

An inelastic housing supply – one that struggles to expand production to meet new demand – is gradually transforming many Washington state communities into "boutiques." Those individuals with high skills and high earnings are welcome to stay, while those with modest earning power are forced further and further away. This is born out by the fact that economic growth in King County is now having an impact in Thurston County, and even Lewis County is feeling the heat.

It is a lack of land capacity in urban areas that makes housing supply so inelastic, pushing up prices and, ultimately, reducing the diversity of local economies. The zoning choices made by each community determine land capacity. If communities are to be vibrant and healthy, they must provide housing for those who work in a variety of jobs. While, the GMA calls for every community to plan for sufficient housing for all economic segments of the population, this is not happening currently. We are caught in a cycle that is driving out middle income jobs. The only way to break this cycle is for communities to increase the ability to use land for housing.

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