Can We Tell if Growth Management Aids or Thwarts Affordable Housing?

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Introduction

At first glance, growth management policies that confine development to urban growth can be viewed as making housing more costly and in effect discriminating against moderate and low-income households.

"…the common assumption is that by limiting the supply of developable land, all growth management policies reduce the supply of housing. Basic economic theory suggests that if housing supply is low relative to demand, then the price for it will be high, reducing its affordability. While this reasoning may seem logical, it is far too simplistic. Housing prices are actually determined by a host of interacting factors, such as the price of land, the supply and types of housing, the demand for housing and the amount of residential choice and mobility in the area" (Nelson, Pendall, Dawkins, Knaap).

In fact growth management plans and policies attempt to do many things, limit urban sprawl, improve transportation options, create more compact development and provide housing affordable to a wide range of residents. Nelson et al contrast 'laissez-faire' land use practices with what growth management could achieve.

Traditional land use practices tend to be 'laissez-faire' in their approach to affordable housing, or they deliberately zone for low-density, expensive homes to exclude low-income households or communities of color. Properly designed growth management programs, on the other hand, aim to overcome these exclusionary effects. Portland, OR, for instance, has a growth management policy that draws a growth boundary to protect farmland but also increases densities inside the boundary and mandates the development of a mix of housing types including affordable housing (Nelson, Pendall, Dawkins, Knaap).

The question is whether or to what extent growth management aids or thwarts the provision of affordable housing. To attempt to answer this question, this paper looks at several metropolitan counties operating in a growth management context to see if housing is affordable to moderate and low income residents and if programs and policies are in place to influence creation and preservation of affordable housing.

Growth Management

Growth management is "the utilization by government of a variety of traditional and evolving techniques, tools, plans, and activities to purposefully guide local patterns of land use, including the manner, location, rate, and nature of development."[1] Calling growth management "active and dynamic," Benjamin Chinitz writes that

"it seeks to maintain an ongoing equilibrium between development and conservation, between various forms of development and concurrent provisions of infrastructure, between the demands for public services

[1] Randall W. Scott, ed., *Management and Control of Growth,* as quoted in Douglas Porter, *Managing Growth in America's Communities,* Island Press, Washington DC, 1977, p. 10.

generated by growth and the supply of revenues to finance those demands, and between progress and equity."[2]

Growth management is a policy response to the unbridled outward growth of America's metropolitan areas following World War II. Such rapid growth has eaten up farmland and sensitive environments while outpacing the provision of services including utilities, schools and roads. Growth management represents a set of planning and investment tools utilizing comprehensive planning techniques while tying plans to the financing of public infrastructure. It is also political in that it offered a measured response to the no-growth or anti-growth movements that emerged in communities in the 1970s, and it forces value choices about what constitutes the appropriate balance between natural areas protection and urban development, and between private and public rights.

A dozen states have adopted comprehensive growth management laws that guide a process of defining the long term future, creating plans and implementing tools to manage and direct the interrelationships of development, land use, transportation and environment.[3] In general terms each state establishes a process to protect natural resource, critical and agricultural lands, to create urban growth areas, to relate local plans and activities to regional and statewide efforts, and to link concurrent public investments.

Smart Growth

Growth management, Douglas Porter notes, "is a dynamic process…an ever-changing program of activities, a continuous process of evaluating current trends and management results and updating both objectives and methods."[4] This paper views smart growth as part of growth management's "dynamic, ever-changing process." Smart growth draws on important concepts and tools from the past thirty years of growth management such as sustainability, neo-traditional development, transit oriented development, and the concept of mixed-use development which provides access to housing, services and jobs. It represents finer grained and more prescriptive growth management implementation strategies. For example smart growth promotes specific kinds of high density developments advocated by new urbanists such as Andres Duany and Peter Calthorpe, that are pedestrian oriented, on a tight grid, high density, connected to high capacity public transit, and contain a mix of uses. Smart growth is not about high densities alone. As Danielsen, Lang, and Fulton point out, residents of metropolitan Los Angeles live with the highest gross population density of the nation's twenty largest metropolitan areas. It is possible to have high density and spread out, auto-oriented patterns that do not achieve Smart Growth results. Therefore Smart Growth development represents certain kinds of carefully nuanced development that create or reinforce community.[5]

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[2] Benjamin Chinitz, "Growth Management: Good for the Town, Bad for the Nation?" in Douglas Porter, *Managing Growth in America's Communities*, Island Press, Washington DC, 1977, p. 10.
[3] Denny Johnson, Patricia Salkin, and Jason Jordan, *Planning for Smart Growth: 2002 State of the States*, APA, 2002.
[4] Porter, p 11
[5] Karen Danielsen, Robert Lang and William Fulton, "Retracting Suburbia: Smart Growth and the Future of Housing," Housing Policy Debate, Volume 10, Issue 3, 1999, p 516-7.

Smart Growth makes the relationship of public investment to desirable land use and community building explicit. In Maryland, for example, the state will consider funding projects only in preferred development areas where infrastructure can support development and where it contributes to existing communities first. Smart Growth calls for choices in housing type, location and costs and for similar mobility choices so that the automobile is not the sole transportation option, much of this to be accomplished through urban and suburban infill housing.[6]

Just as Growth Management, a term first used in the 1960s, had political dimensions to it, so does Smart Growth, a term coined in the 1990s. Growth management presented a rational, business-like alternative to accommodating future growth in contrast to the more radical no-growth movement, enabling various stakeholders to embrace the concept and pass growth management legislation. Today, Smart Growth places proponents on the high ground in a political debate, after all who wants to favor "dumb growth"?

In this paper we will generally use the term Growth Management to refer to the concepts and laws regarding the coordination, timing, and location of growth of which smart growth is a part. We will use the term Smart Growth to refer to the principles and implementation practices that have and will evolve to develop compact, pedestrian oriented, livable communities within urban growth areas.

Affordable Housing

The private housing and mortgage markets provide housing with great effectiveness to the majority of households. After all we are a nation of homeowners with two thirds of American households owning their own homes. Generally speaking, mortgage lenders prefer that housing costs represent a third or less of total income which would make the housing payment affordable. HUD has traditionally used an affordability guideline of 30% of income for housing costs. We will use the 30% guideline as the working definition of affordability in this paper, although we understand that a higher percentage is sometimes used. Additionally, a fuller picture of affordability is provided by a combination of housing location and transportation costs, a subject acknowledged later in this paper, but worthy of greater investigation in further research.

This paper focuses on the availability of affordable housing for moderate, low and very low income residents earning less than 80% of the median income in urban metro counties, that is those residents whose incomes will likely not enable them to buy or rent at prevailing market rates. There are several reasons to focus on housing for this income group.

The first is that growth management principles emphasize equity in development and in the availability of housing to all income strata in particular. In states where growth management laws exist, jurisdictions are asked to plan for affordable housing. In Washington State, for example, counties and cities planning under the Growth

[6] Smart Growth America and the Smart Growth Network provide web based access to smart growth principles and information: www.smartgrowthamerica.org.

Management Act must include a housing element and must show how they will accommodate 20-year state population projections. At least two states, New Jersey and Massachusetts have fair share housing laws that go further. In New Jersey the Supreme Court determined that every municipality in a growth area has a constitutional obligation to provide, through its land use regulations, a realistic opportunity for a fair share of its region's present and prospective needs for housing for low and moderate income families.[7] The second is that a variety of policy makers and stakeholders believe that "healthy communities means having a mix of housing styles and prices without detracting from the attractiveness of overall development."[8] The third is a practical interest in having public servants including teachers, firefighters, police and service providers able to live in the community in which they serve. For fast growing, desirable metro counties which are the subject of this paper, median household income ranged between $53,157-$76,933[9] making it very difficult indeed for many kinds of wage earners to compete in the housing market.

Purpose

The purpose of this paper is threefold:

- To analyze housing affordability for moderate and low income households in several metro counties which have growth management laws;
- To understand the growth management and smart growth laws and tools in place and whether they aid or thwart the development and preservation of affordable housing; and
- To offer an approach, which jurisdictions can tailor, to monitor efforts at providing affordable housing

"The literature on the link between smart growth and housing remains underdeveloped."[10] This paper aims to make a modest addition by looking at the affordable housing experiences in four metropolitan counties in growth management/smart growth states. To what extent do the growth management policies in four counties in New Jersey, Maryland, and Washington offset the potential exclusionary effects of limiting land for development? Can we tell if the proper mixture of policies, programs and market forces exist to provide a continuum of housing types in larger, growing, affluent urban counties?

[7] New Jersey Permanent Statutes 52:27D-301 referencing Mount Laurel Supreme Court ruling 92 NJ 158 (1983) www.njleg.state.nj.us/ and www.state.nj.us/dca/coah/about.htm.

[8] Kleit, Rachel Garshick, *Housing Mobility and Healthy Communities: Montgomery County, Maryland's Moderately Priced Dwelling Unit Program*, paper prepared for Fannie Mae Foundation 1998 Tri-Country Conference on Housing and Urban Issues.

[9] Median household income for King, Montgomery, Somerset, and Middlesex counties as reported in Census 2000.

[10] Daneilsen, Lang and Fulton, p. 513

Research Approach

Selecting Cases:
Since growth management has direct application to areas of new growth at the urban periphery as well as the infill of established communities, we looked for metropolitan counties that had both developed and undeveloped lands. This meant excluding urban counties that are largely built-out, like Bergen County in New Jersey, so we could look at policies and tools affecting new development as well as old. We sought counties in states that have adopted or which themselves have adopted the following core growth management principles:

- Limit outward growth
- Reduce dependency upon automotive transport
- Promote compact, higher-density development
- Preserve open space, sensitive and resource lands
- Redevelop inner-core areas and infill sites
- Create more affordable housing
- Create a greater sense of community through new urbanism, pedestrian friendly, and mixed-use urban villages

Since there are only a dozen growth management states, our search centered on Delaware, Florida, Georgia, Maryland, New Jersey, Oregon, Pennsylvania, Rhode Island, Tennessee, Vermont, Washington, and Wisconsin. We wanted to have east and west coast examples and as Portland, OR is oft sited and studied we decided to eliminate that metro area, selecting instead King County, WA as the west coast case. King County is a large urban county that includes Seattle, suburbs and cities, and rural areas and has a comprehensive plan and urban growth boundary consistent with the state's Growth Management Act. On the east coast we turned to New Jersey in part because it has twin statewide laws adopted in 1985 mandating state comprehensive planning and fair housing. We selected the adjacent counties of Somerset and Middlesex, two counties with both established cities and some of the fastest growing boroughs and townships at the periphery of the metropolitan area. Maryland was of interest as the first state to name and adopt smart growth legislation, and we selected Montgomery County, a large, affluent county bordering Washington, DC. Montgomery County had developed its own pioneering growth management and inclusionary housing laws in the late 1960s and early1970s respectively, which may explain why it has both extensively developed jobs and housing centers as well as remaining open space and farmland. At the suggestion of the symposium sponsors, we then compare these counties with Fairfax County, Virginia, an urban county in the Washington, DC metropolitan region which has an inclusionary housing law similar to Montgomery County's, but without a similar growth management framework.

Certainly the case could be made to include more counties, to substitute others, or to examine the impact of growth management policies on housing affordability at a different community scale altogether. However given the time and funding limitations of this inquiry, we elected to look at these four fast growing, affluent counties in large

metropolitan areas, with populations of a million or more (Somerset and Middlesex combined). We were able to obtain and use census data from 1990 and 2000, to reference state and local legislation, and contact key public and non profit officials as well as other observers and experts in each area.

Our research approach was fourfold:

- Assemble a profile of housing affordability derived from 1990 and 2000 census data
- Identify the existence of selected programs and policies which could aid or thwart the provision of affordable housing
- Document the number of affordable housing units developed
- Identify, when possible, links with growth management programs and policies

As previously noted, the subject of affordable housing is very complex and greatly affected by the prevailing market. Therefore attributing the adequacy of affordable housing in metro counties to growth management policies and techniques alone may never be possible.

Selecting Housing Affordability Indicators:
We sought data from the 1990 and 2000 census that would show the portion of income moderate and low-income households spent on housing costs in this ten-year interval. We also looked at owner occupied housing value[11] and the cost of renting a house to determine if they were changing relative to median household income. While we are interested in the degree of change in housing affordability over time, it is also essential to show whether housing is affordable for low and modest income households. To do this we have provided the median home and rental costs for each metro county related to what the metropolitan region's[12] low and modest income households can afford to spend on housing. This is important to know as housing may remain unaffordable for most of these households in real terms even if such housing had become incrementally more affordable during the period 1990-2000.

Three groups of housing affordability indicators are used in this paper to estimate the changes in housing affordability in the last decade for the counties under consideration.

The first group of indicators assesses the absolute and percentage change in the price of median value owner occupied and rental housing and then compares it with the changes in median household income of the metropolitan region. The metropolitan region data allows us to look at a more complete picture of households that may seek housing than just those in the wealthiest counties. It also recognizes that metropolitan regions are dynamic with people making location decisions among many cities and counties.

[11] Value is the respondent's estimate of how much the property (house and lot, mobile home and lot, or condominium unit) would sell for if it were for sale. Source: Census 1990 and Census 2000.
[12] The metropolitan region of the county is the Consolidated Metropolitan Statistical Area (CMSA), as demarcated in Census 2000, in which the county is situated.

The *change in affordability* of renter and owner occupied housing for **median income households** is assessed by creating two data relationships, a 'rent to income ratio' and a 'house value to income ratio.' The rent to income ratio is the ratio of percentage change in median gross rent to the percentage change in median household income; a ratio above one indicates lessened affordability while a ratio below 1 indicates increased affordability For example if the median gross rent increased from $500 to $1000 (a 100% increase) and the median household income increased from $50,000 to $75,000 (a 50% increase) from 1990 to 2000, then the 'rent to income ratio' is 100/50 or 2. This means that median gross rent rose twice as much as median household income, a lessening of affordability. Similarly, the house value to income ratio is the ratio of percentage change in the median value of owner occupied housing to the percentage change in the median household income. For example if the median house value increased from $100,000 to $170,000 (a 70% increase) while the median income increases from $50,000 to $75,000 (a 50% increase), then the 'house value to income ratio' is 70/50 or 1.4, also a lessening of affordability.

The second group of indicators assesses the housing affordability gap by showing: a) the additional annual income required, by families in the metropolitan region earning median and 80% of median household income, to afford median priced owner-occupied housing; and b) the additional annual income required, by families in the metropolitan region earning 80% of median, and 50% of median household income, to afford median priced rental housing.

The third group of indicators assesses the *change in affordability* of owner and renter occupied housing costs[13] **for modest and low income households earning below 80% of median income.** Here, for each income category, the percentage of households paying more than 30% of income for housing is compared for the years 1989 (source: Census 1990) and 1999 (source: Census 2000). The Census tables provide renter and owner housing cost data for various income categories in term of the percentage of income spent on housing. The income groups used in census tables were transformed into income groups as percentage of median income, using median household income of the County. It was assumed that the distribution of households within each income group was linear with respect to income and housing costs[14].

[13] Another way to estimate housing affordability is to examine the affordability of the houses of different price ranges for various income groups by looking at the sales price of the houses. In this paper, this approach could not be used due to lack of availability of reliable and consistent housing sales data for the whole study period across all the counties examined herein.

[14] We would like to acknowledge that Chandler Felt, chief demographer in King County and author of the county's annual growth report, developed this methodology. This methodology was adopted by the King County in its bulletin on affordable housing titled "**Affordable Housing: An Annual Bulletin Tracking Housing Costs in King County *December 2002***".

The housing affordability indicators below are arrayed graphically in tables or bar charts with explanatory text later in this paper:

- Absolute changes in the median price of owner occupied and rental housing;
- 'Rent to income ratio'. The ratio of percentage change in median gross rent to the percentage change in median household income;
- 'House value to income ratio'. The ratio of percentage change in the median value of owner occupied housing to the percentage change in the median household income;
- Affordability gap in median value owner occupied housing;
- Affordability gap in median priced rental housing;
- Proportion of Owner Occupied Households Paying more than 30% of Income for Housing Costs; and
- Proportion of Renter Occupied Households Paying more than 30% of Income for Housing Costs.

Selecting Growth Management Policy and Program Indicators[15]*:*
If the right blend of growth management policies and smart growth regulations are in place then, at the least jurisdictions have the capability to enable the development of affordable housing. (Whether the funding or political will exists to implement these policies and programs is a separate and distinct matter.) What are the policies and programs that might aid or thwart affordable housing? We looked at three key issues that we believe must be addressed in order to enable affordable housing in urban growth areas: the ability to incentivize density and infill development in a compact form; the ability to reduce the costs of development; and the ability to retain permanent housing affordability. Within these broad areas we sought to learn if the metropolitan counties employed any or all of ten indicator policies and programs grouped and defined below and then discussed.[16]

Density incentives and infill form

- **Cottage Housing**: This zoning allows for small (1000 square feet), single family detached homes at densities from 10-25 dwelling units per acre in urban growth areas.
- **Transit Oriented Development:** Enables jurisdictions to plan for dense mixed use developments located with or adjacent to transit stations and park and ride lots.

[15] These indicators are taken in part from the *2002 King County Growth Management Planning Council Housing Survey*, produced by the King County Housing and Community Development Program. The county and 28 municipalities representing all the urban growth centers responded to queries about action taken or underway to meet housing affordability and production targets in the comprehensive plans.
[16] Are these the right indicators? We selected ours in part on the progressivity or cutting edge nature of the policy or program. Knaap and others suggest that urban growth boundaries, minimum lot zoning or agricultural reserve areas have a more direct and intrusive effect on housing affordability. These and other indicators could be incorporated in future efforts to monitor the relationship between growth management and affordable housing.

- **Accessory Dwelling Units:** Detached *mother in law* or *granny flat* apartments in single family residential areas can increase density with minimal change in neighborhood character.
- **Flexible/Reduced Parking:** Off street parking requirements be shared, reduced, or eliminated to reduce the cost of housing.
- **Design Standards:** Design standards applied to multi-family and affordable housing units reduce the stigma of subsidized housing.
- **Incentive Programs:** Density bonuses through inclusionary zoning and tax exemptions for infill and affordable housing projects increase the supply of housing
- **Transfer of Development Rights:** TDR programs are a unique kind of incentive to simultaneously protect agricultural and resource lands in rural areas while adding density bonuses in urban areas, infill areas.

Costs of new development

- **Five Story Wood Frame Multi-Family Construction:** This method of building allows greater height and densities at lower cost to developers; it is allowed under some uniform building codes.
- **Impact Fees:** Impact fees for parks, transportation, fire protection or schools add to the cost of new development.
- **Fee Waivers:** Exempting affordable housing from impact fees reduces housing costs.

Affordability permanence

- **Affordable Housing Preservation:** Do programs exist to maintain and repair current housing units and make them permanently affordable through rent restrictions or outright ownership by a non-profit or public entity?

The corollary to protecting open space and natural resource lands is to concentrate housing within urban growth areas. This invariably means housing densities far greater than most suburban residential development and an entirely different form of housing and community development. Urban and suburban residents often oppose increasing affordable housing densities through infill development because it threatens the existing neighborhood scale and character and raises fears of reduced property values and racial succession.[17] Achieving the objective of providing affordable housing requires that such programs and policies be in place that provide incentives to developers and local residents. For this reason we inquired if the counties offered density bonuses through inclusionary zoning and/or tax exemptions for infill and affordable housing projects. Transfer of Development Rights (TDR) programs also provide density bonuses in urban growth areas while protecting farmland and open space outside it, which is enjoyed and utilized by urban area residents.

[17] Danielsen, Lang and Fulton p 516

Density alone is not the answer. New urbanists advocate accessory dwelling units (ADU) or mother in law apartments as a means of reinforcing traditional neighborhood character while providing affordable housing and increasing density without high-rise construction. An appealing aspect of ADUs in single family residential areas is that this new stock of affordable housing is developed by private homeowners who receive new income from the opportunity to rent out an apartment (over a detached garage facing an alley for example). ADU ordinances enable the private market to provide affordable housing stock without the intervention of non-profit developers or public housing authorities, institutions that may be anathema to many urban and suburban private homeowners. A major stumbling block to implementing increased densities or ADU programs is parking. Standard suburban level off-street parking requirements which significantly increase development costs for multifamily housing and neighbors' fears of loss of on-street parking to ADU residents stand in the way of these smart growth alternatives. Flexible and reduced parking standards can go a long way toward addressing these problems.

Transit Oriented Development (TOD) zones and enabling regulations further reduces car dependence and enhances compact urban form. Originally conceived as pedestrian oriented mixed-use development within a quarter mile of light rail or train stations, TODs can also be adapted to bus systems at transit centers and hubs. Residents and workers can utilize high occupancy transit thus reducing roadway and parking costs and space usage. TODs also free up more of residents' incomes for housing, a concept recognized in the Location Efficient Mortgages now being piloted by banks in selected regions.

One growth management tenet that accounts for the true cost of development is use of impact fees, such that new development pays its share of roads, parks, schools and other infrastructure and service. In this way existing residents do not subsidize new peripheral development. Impact fees as they are charged on a per dwelling unit basis, add to the cost of a house and may also be biased toward higher priced housing, could thwart affordable housing in new development areas, unless they can be waived for affordable housing or other socially beneficial uses. For this reason we are interested in both impact fee existence and waiver for affordable housing, as one could thwart and the other aid affordable housing development. Design standards for affordable housing could be another additional cost. Design standards enable affordable units to blend into new development and reduce resident stigmatization caused by cheaper-looking design and finishes. Some affluent communities employ design standards to encourage affordable units to fit in. Some waive design standards to reduce the cost.

Building code adjustments can reduce construction costs without compromising safety. These savings can make the resultant housing more affordable. Some jurisdictions are allowing wood construction of multi-family developments over four stories in height.

The extent to which the policy and program indicators are available and in use is shown in this paper in a chart format with symbols as follows:

Table 1. Growth Management Programs and Policies

	Program and Policy Indicators										
County	Cottage Housing	Transit Oriented Development	5 Story Wood Frame	Accessory Dwelling Units	Flex Parking	Impact Fees	Impact Fee Waiver	Transfer of Development Rights	Incentives	Design Standards	Preservation
XXXX											

Key	
☐	Unavailable/ Unused by jurisdictions
▒	Used by some
■	Used by many

The Metro Counties

In this section of the paper we summarize the population, geographic, and income characteristics of the urban counties along with information on housing affordability, growth management policies and programs, and housing production.

King County, Washington

King County has a population of 1.8 million, which includes the city of Seattle (570 thousand) in a land base approximately the size of Rhode Island. It is the state's most populous and affluent county with a median income for a family of four of $72,000. About three quarters of its residents live in incorporated municipalities and about one quarter live in unincorporated, often rural areas of the county. In the late 1980s King County and the three other central Puget Sound counties began to develop a regional plan called Vision 2020. It called for designation of twenty one urban centers to accommodate future population and job growth within the metropolitan growth area. Shortly thereafter Washington State enacted the Growth Management Act (GMA) of 1991.

The GMA requires that counties and cities prepare 20-year comprehensive plans which identify where and how growth should occur, including establishing Urban Growth Areas to describe where growth will be encouraged and where it will be discouraged. The plans must show how the area will accommodate population projected by the state Office of Financial Management for the 20-year period. All incorporated jurisdictions within the county must prepare comprehensive plans that are consistent with the county plan. The GMA requires that governments update their comprehensive plans every five years. If cities and counties do not meet these update deadlines, they automatically lose eligibility for Public Works Trust Fund and Centennial Clean Water Act funds and their right to collect Impact Fees.

County plans must contain at least six elements: land use, housing, capital facilities, utilities and transportation, and a rural element and can include seven more[18]. Under the GMA, the state can use a combination of incentives and sanctions. The most notable sanction is the withdrawal of state funds from counties that do not comply with GMA.

Housing Affordability Indicators: In King County between 1990 and 2000, the median value of owner occupied housing increased by $95,800, a 67.90% increase. Similarly, the median gross rent increased by $248, a 48.63% increase. Meanwhile the median household income of the region increased by $15,686, a 44.76% increase (see Tables 2 and 3 below for details). Thus the rent to income ratio and house value to income ratio in King County is 1.09 and 1.52 respectively. The increase in gross rent was only 9% more than the increase in median household income for the period 1990 to 2000, while the increase in the value of owner occupied housing was a 52% more than the increase in the median household income for the same period. This indicates a significant rise in the price of owner occupied housing over the ten-year period.

Table 2: Changes in Owner Occupied Housing Costs Related to Income in King County: Years 1990 and 2000

County	Year	Median Value of Owner Occupied Housing of the County	Absolute Change in Median Value of Owner Occupied Housing from 1990 to 2000	% Change in Median Value of Owner Occupied Housing from 1990 to 2000	Median H.H. Income of the County	Median H.H. Income of the Metropolitan Region	Absolute Change in Median H.H. Income of the Metropolitan Region from 1990 to 2000	% Change in Median H.H. Income of the Metropolitan Region from 1990 to 2000	House Value to Income Ratio-Metropolitan Region
King	1990	$141,100			$36,179	$35,047			
King	2000	$236,900	$95,800	67.90%	$53,157	$50,733	$15,686	44.76%	1.52

Table 3: Changes in Rental Housing Costs Related to Income in King County: Years 1990 to 2000

County	Year	Median Gross Rent of Rental Housing of the County	Absolute Change in Median Gross Rent from 1990 to 2000	% Change in Median Gross Rent from 1990 to 2000	Median H.H. Income of the County	Median H.H. Income of the Metropolitan Region	Absolute Change in Median H.H. Income of the Metropolitan Region from 1990 to 2000	% Change in Median H.H. Income of the Metropolitan Region from 1990 to 2000	Rent to Income Ratio-Metropolitan Region
King	1990	$510			$36,179	$35,047			
King	2000	$758	$248	48.63%	$53,157	$50,733	$15,686	44.76%	1.09

In the year 2000, the median value owner occupied housing was unaffordable to households earning median and 80% below median income. The affordability gap[19] was approximately $5000 for median income household and $15,000 for household earning 80% below median household income (see Table 4 below).

[18] The GMA sets thirteen goals, which can become elements of the comprehensive plan. They are: urban growth, reduce sprawl, transportation, housing, economic development, property rights, permits, natural resource lands, open space and recreation, environment, citizen participation, public facilities/services, historic preservation.

[19] Affordability gap has been defined as the additional annual income needed to afford the desired housing.

Table 4: Affordability Gap in Median Value Owner Occupied Housing in King County: Year 2000

County	Affordability Gap for Median Income Household	Affordability Gap for Households Earning 80% of the Median Household Income
King	**-$4,867**	**-$15,014**

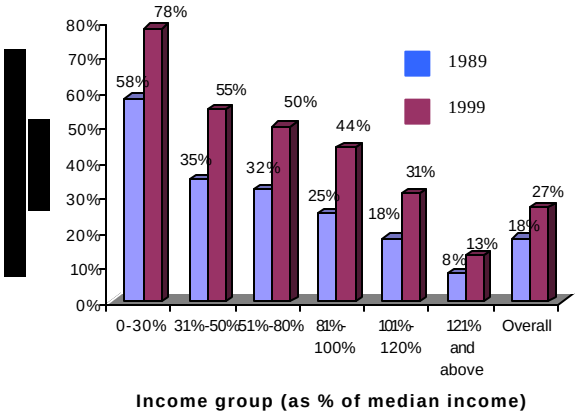
In the year 2000, the median priced rental housing was affordable to households earning 80% of the median household income. It was not affordable for households earning 50% of the median household income. The affordability gap in this income category was approximately $5000 (see Table 5 below).

Table 5: Affordability Gap in Median Priced Rental Housing in King County: Year 2000

County	Affordability Gap for Households Earning 80% of the Median Household Income	Affordability Gap for Households Earning 50% of the Median Household Income
King	$10,266	**-$4,954**

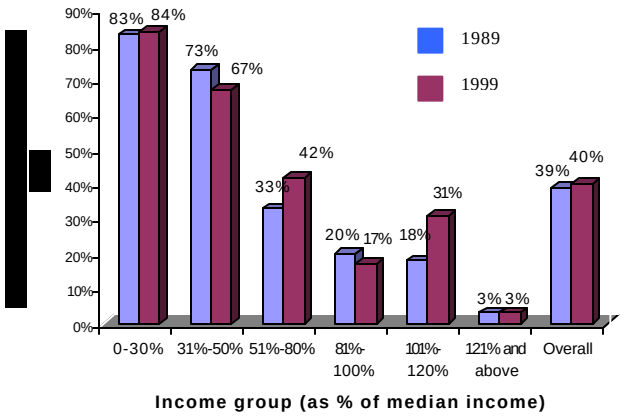
The charts below show changes in housing affordability for moderate and low-income households by income group.

King County: Proportion of Owner Households Paying more than 30% of Income for Housing Costs



- Home ownership affordability has worsened for all income groups.
- The percentage of households paying more than 30% of income towards housing costs has increased by approximately 20% for the below 100% of median income groups.
- In 1999, overall 9% more households paid over 30% of their income towards housing costs than in 1989.

King County: Proportion of Renter Households Paying more than 30% of Income for Housing Costs



- The percentage of renter households paying more than 30% of income towards housing costs has increased in the 51%-80% of the median income group, and decreased in 31%-50% income group and is almost constant for below 30% of the median income group.

- The overall renter housing affordability has remained unchanged with only 1% more households paying over 30% of the income towards rent over the 10-year period.

In summary: In King County for the year 2000, the owner occupied housing was unaffordable even to households earning median household income. Rental housing was unaffordable to households earning 50% of the median household income. Analyzing the trends between the years 1990 and 2000, rental housing affordability at the median rent and household income level has stayed the same while the affordability of median owner occupied housing has worsened. Home ownership for below 80% of the median income households, has become less affordable over the last decade. Affordability of rental housing has not decreased by the same magnitude though staying about the same for the below 80% of median income households (except for the 51%-80% below median income group for whom the affordability of both owner occupied and rental housing has worsened).

Program and Policy Indicators: Several of the larger municipalities in King County have adopted cottage housing provisions in their zoning codes that limit the size of detached single family units to less than 1000 square feet. Typical density is twice that of standard single family houses; in Seattle the density is 1 cottage per 1600 square feet of lot size or about 25 units/acre. TOD zoning is in place in many jurisdictions on commute rail lines and anticipated light rail lines; two affordable housing developments have been integrated with county park and ride bus transit centers. Over the past two years six cities in the county have approved five story wood frame construction with another seven considering adopting such standards. Most cities allow ADUs if attached to the home, while several cities permit detached ADUs as well in single family neighborhoods.

Almost all jurisdictions allow for shared parking, many offer reductions for affordable and senior housing, and Seattle waives parking requirements for affordable housing projects serving very low income (below 30% of median income) residents. Impact fees

are used fairly extensively in King County. Some or all of these fees are waived for affordable housing or infill housing projects in many jurisdictions. TDR programs are in place in King County and several cities to protect agricultural and resource lands and to provide density bonuses in urban receiving areas. Most jurisdictions offer density bonuses for affordable housing projects and mixed use projects in downtown areas. Several jurisdictions have inclusionary zoning requirements as well. Most cities have design standards and review that apply to multifamily and mixed use developments. One affluent city exempts affordable housing projects from design review. Most cities work through a county consortium to use block grant funds for affordable housing preservation through repair, rehab, weatherization and finance programs.

Table 6. Program and Policy Table for King County

	Program and Policy Indicators										
County	Cottage Housing	Transit Oriented Development	5 Story Wood Frame	Accessory Dwelling Units	Flex Parking	Impact Fees	Impact Fee Waiver	Transfer of Development Rights	Incentives	Design Standards	Preservation
King	▫	■	▫	▫	■	▫	▫	▫	▫	■	■

Key	
□	Unavailable/ Unused by jurisdictions
▫	Used by some
■	Used by many

Affordable Housing Production: During the decade 1990-2000 94,894 new residential units were built in King County. Based on figures from a coalition of non-profit housing providers we estimate that 13,000 or nearly 14% of the total were affordable housing units.[20] King County estimates that the 'gap' between demand and supply of affordable housing in 2000 was 29,690 housing units.[21]

Montgomery County, Maryland

Montgomery County, the nation's sixth richest county, is located immediately north and northwest of Washington DC. With more than 800,000 residents, it is the most populous county in Maryland. During the 1970s and 1980s, it grew from a bedroom community to the region's second largest employment center. Now more than 60 percent of residents

[20] The Housing Development Consortium of Seattle-King County, which represents 29 nonprofit housing development organizations, reports it has produced 14,000 affordable housing units since 1988. We are estimating that this represents 70% of the total production of affordable housing when units developed through the Seattle Housing Levy and various public housing authorities are included. We have prorated the production figure for the 1990-2000 decade.
Several agencies provide or assist in providing affordable housing. These include King County Housing and Community Development Program, the King County Housing Authority, the Washington State Housing Finance Commission, the Washington Housing Trust Fund, and the other city level housing agencies like the City of Seattle Office of Housing, the Seattle Housing Authority, the Renton Housing Authority, and the Muckleshoot Housing Authority. At present, there is no comprehensive inventory of units created through affordable housing grants or incentive programs.

[21] "Annual Bulletin Tracking Housing Costs in King County," King County, WA 2002

work and live in the County. Montgomery County has been in the forefront of both land use planning, delineating urban growth boundaries and protecting agricultural land, and fair housing policy. [22]

In 1969 Montgomery County adopted a master plan entitled "On Wedges and Corridors"[23] which directed development along two major transportation corridors, the I-270 and Highway 29 corridors, while preserving low density development and open space between the corridors. The county implements the plan through zoning and regulatory mechanisms but Porter identifies four initiatives that characterize this pioneering growth management effort: "1. The use of adequate public facilities measured as a core concept for year-to-year management of development; 2. The agricultural land preservation program; 3.The county's inclusionary housing program; and 4.Its encouragement of development around Metrorail stations."[24]

In 1974 the county adopted the Moderately Priced Housing law, the country's first mandatory, inclusionary zoning law. It established the Moderately Priced Dwelling Unit program (MPDU) which requires 12.5 to 15 percent of the total units in every new subdivision or high-rise building of 50 units or more be sold or rented at specified affordable prices. Developers are granted density bonuses of up to 22 percent, which allow them to build more units on a particular parcel of land than zoning normally permits. Households with an income at or below 65 percent of the area's median income qualify for the program. Since 1974 more than 11,000 units of affordable housing have been built, over 1600 of these units are owned and managed by the Housing Opportunities Commission, the county public housing agency.

Housing Affordability Indicators: In Montgomery County between 1990 and 2000, the median value of owner occupied housing increased by $21,000, a 10.46% increase. Similarly, the median gross rent increased by $174, a 23.51% increase. Meanwhile the median household income of the region increased by $10,407, 22.20% increase. (see Tables 7 and 8 below for details). Thus the rent to income ratio and the house value to income ration in Montgomery County is 1.06 and 0.47, respectively. The increase in gross rent was more than the increase in median household income for the period 1990 to 2000, while the increase in the value of owner occupied housing was only half of the increase in median household income for the same period, indicating an easing of owner occupied housing affordability and worsening of rental housing affordability for the median income level.

[22] The State of Maryland adopted a set of laws collectively known as Smart Growth in 1997 which built on a line of previous state planning legislation which began in 1974 with the state intervention policy and the 1992 planning act that required all jurisdictions to address resource protection and sprawl reduction in their comprehensive plans. As Montgomery County's growth management plan predates these efforts and includes an affordable housing law, this paper focuses on the county. More information on Smart Growth and its predecessors can be obtained from www.mdp.state.md.us.

[23] The plan was prepared by the Maryland-National Capital Park and Planning Commission for Montgomery and Prince George's Counties. Today it is Montgomery County has its own planning board that updates and administers the plan. Doug Porter provides a case study of the plan, its history and attributes in *Managing Growth in America's Communities*, p33-43.

[24] Ibid p. 35

Table 7: Changes in Owner Occupied Housing Costs Related to Income in Montgomery County: Years 1990 and 2000

County	Year	Median Value of Owner Occupied Housing of the County	Absolute Change in Median Value of Owner Occupied Housing from 1990 to 2000	% Change in Median Value of Owner Occupied Housing from 1990 to 2000	Median H.H. Income of the County	Median H.H. Income of the Metropolitan Region	Absolute Change in Median H.H. Income of the Metropolitan Region from 1990 to 2000	% Change in Median H.H. Income of the Metropolitan Region from 1990 to 2000	House Value to Income Ratio-Metropolitan Region
Montgomery	1990	$200,800			$54,089	$46,884			
Montgomery	2000	$221,800	$21,000	10.46%	$71,551	$57,291	$10,407	22.20%	0.47

Table 8: Changes in Rental Housing Costs Related to Income in Montgomery County: Years 1990 to 2000

County	Year	Median Gross Rent of Rental Housing of the County	Absolute Change in Median Gross Rent from 1990 to 2000	% Change in Median Gross Rent from 1990 to 2000	Median H.H. Income of the County	Median H.H. Income of the Metropolitan Region	Absolute Change in Median H.H. Income of the Metropolitan Region from 1990 to 2000	% Change in Median H.H. Income of the Metropolitan Region from 1990 to 2000	Rent to Income Ratio-Metropolitan Region
Montgomery	1990	$740			$54,089	$46,884			
Montgomery	2000	$914	$174	23.51%	$71,551	$57,291	$10,407	22.20%	1.06

In the year 2000, the median value owner occupied housing was affordable to households earning median while it was unaffordable to 80% below median household income. The affordability gap was approximately $6000 (see Table 9 below).

Table 9: Affordability Gap in Median Value Owner Occupied Housing in Montgomery County: Year 2000

County	Affordability Gap for Median Income Household	Affordability Gap for Households Earning 80% of the Median Household Income
Montgomery	$5,211	**-$6,247**

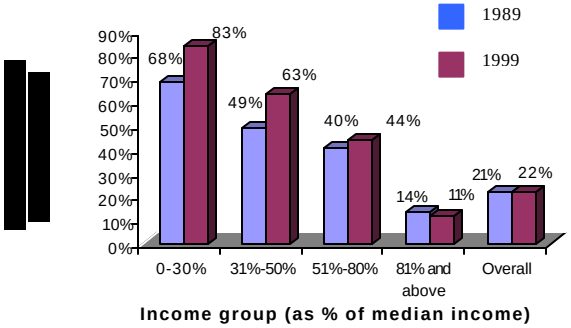
In the year 2000, the median priced rental housing was affordable to households earning 80% of the median household income. It was not affordable for households earning 50% of the median household income. The affordability gap in this income category was approximately $8000 (see Table 10 below).

Table 10: Affordability Gap in Median Priced Rental Housing in Montgomery County: Year 2000

County	Affordability Gap for Households Earning 80% of the Median Household Income	Affordability Gap for Households Earning 50% of the Median Household Income
Montgomery	$9,273	**-$7,915**

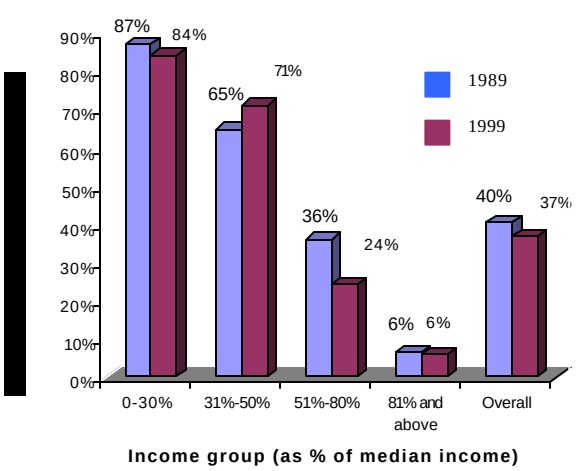
The charts below indicate the change in housing affordability for the various income groups.

Montgomery County: Proportion of Owner Households Paying more than 30% of Income for Housing Costs



- Overall owner occupied housing affordability situation has remained almost unchanged between 1989 and 1999. This is in spite of more rapid increase in income compared to increases in rents or house values.
- Among the below 80% of the median income groups, housing affordability situation has worsened for all income groups. groups.

Montgomery County: Proportion of Renter Households Paying more than 30% of Income for Housing Costs



- Overall renter occupied housing affordability situation has improved between 1989 and 1999.
- Among the below 80% of the median income groups, situation has worsened for the 31%-50% below median income group while it has improved for below 30% and 51%-80% of the median income groups.

In summary: In Montgomery County for the year 2000, owner occupied housing was unaffordable to households earning 80% of the median household income. Rental housing was unaffordable to households earning 50% of the median household income. Analyzing the trends between the years 1990 and 2000, the affordability of both the median rental and owner occupied housing has improved. Examining the housing affordability situation for below 80% of the median income households, ownership has become less affordable over the last decade. Affordability of rental housing has in general improved except for the 31%-50% below median income group for whom the affordability of rental housing has worsened.

Policy and Program Indicators: Montgomery County does not have cottage housing zoning, but does have TOD mixed use, high density zoning and development at the Bethesda Metro station area. It does not allow five story wood frame construction or accessory dwelling units (except by special exception). Parking credits are awarded for residential development proximate to transit, and parking requirements are reduced by half for MPDUs in multi-family developments. Impact fees for MPDUs are waived. The county's TDR program allows one additional dwelling unit over existing zoning in infill receiving areas for every five acres of agricultural development rights purchased.

The MPDU law combines density bonus incentives with preservation methods. When a developer builds 50 housing units or more in a single development, he or she must set aside 12-15 percent as moderately priced dwelling units (MPDUs). In return, the developer receives a density bonus, which is scaled so that more MPDUs, the larger the bonus. The bonus is only 1% if 12.6% of the housing units are MPDUs but increases to 22% if 15% of the housing units are moderately priced. The developer must price three fifths of the MPDUs to be affordable to households with incomes at or below 63% of the area median income for ten years.

The remaining two fifths of the units are made available for long term preservation as affordable housing. The Housing Opportunities Commission, the county's public housing authority, has the option to buy 75% of the long-term units and local non-profit organizations can purchase the remaining 25%. Design standards enable MPDU townhouses to be constructed in otherwise single family zones with reduced setbacks and compatibility and façade allowances are provided the developer (which can be passed along as an additional cost to the buyer). (Kleit, Roman)

Table 11. Program and Policy Table for Montgomery County

	Program and Policy Indicators										
County	Cottage Housing	Transit Oriented Development	5 Story Wood Frame	Accessory Dwelling Units	Flex Parking	Impact Fees	Impact Fee Waiver	Transfer of Development Rights	Incentives	Design Standards	Preservation
Montgomery	☐	■	☐	☐	■	■	■	■	■	■	■

Key	
☐	Unavailable/ Unused by jurisdictions
▒	Used by some
■	Used by many

Affordable Housing Production: Under the MPDU program, Montgomery County has seen the production of 11,210 units of affordable housing of which approximately 8,000 were for sale units and 3,000 were rental units. Affordable housing production hit its peak from 1980 through 1987 when as many as 1200 units per year went on the market. Since that time production has steadily tapered down to an average of 220 units annually

since 1997.[25] During the period 1976-2002, 120,000 housing units were built in Montgomery County meaning that approximately 11% of the housing produced during the period was affordable. However under the MPDU program, price controls expire after 15-20 years. By the year 2000 6,767 units were no longer price controlled. Montgomery County conducted a survey three years ago that found that approximately two thirds of the non-price controlled units remained affordable to the target households with "only the best built MPDUs in the most desirable areas " showing major price increases.[26]

Somerset and Middlesex County, New Jersey

Somerset and Middlesex counties are among New Jersey's fastest growing counties yet they contain a mix of established communities, some dating back to revolutionary times, new land-intensive suburban development, and open space at the periphery of the New York City metropolitan area. Middlesex County's population is 750,000 and Somerset's is 298,000 on land areas just over 300 square miles each. Median household income is $72,000 and $77,000 respectively[27]. Along with Hunterdon County they comprise the state Council on Affordable Housing's (COAH) Region 3 called by some the "wealth belt" in the middle of the state. Under COAH guidelines a family of four with an income of $72,000 or below qualifies for affordable housing units. Middlesex County is home to one large city, New Brunswick, and several older suburb cities like Metuchen and Carlstadt, which are served by one of three commuter rail lines including the main Northeast corridor line serving Washington, Philadelphia and New York.

The New Jersey Legislature passed the State Planning Act in 1985. The State Planning Act affirmed that the State of New Jersey needed sound and integrated statewide planning in order to "conserve its natural resources, revitalize its urban centers, protect the quality of its environment, and provide needed housing and adequate public services at a reasonable cost while promoting beneficial economic growth, development and renewal." New Jersey utilizes a process of cross-acceptance process by which the State presents its preliminary plan to its 21 counties for review and comparison to their plans.

Both the cross acceptance process and the State Redevelopment and Development Plan adopted in 1992 and then revised in 2001 are voluntary. The Plans call for new development in designated centers, infill, agricultural land protection, and defines the smart growth dollar savings to the state ($1.3 billion in capital infrastructure costs over 20 years and up to $400 million annually in operating costs). It has proven weak primarily because it is voluntary and leaves most land use activity and decisions to the 566 municipalities. The current governor is proposing adopting a new smart growth Big Map for the state which shows where development is permissible, questionable or prohibited using the color codes of green, yellow and red respectively.

[25] MPDU Production Table, Montgomery County Department of Housing and Community Affairs, Moderately Priced Housing Section, 2003.
[26] Correspondence with Sally Roman, MPDU planner, Maryland National Capital Parks, April 2003.
[27] As per 2000 Census.

However New Jersey is a leader in the fair share approach to the provision of affordable housing[28], an outgrowth of State Supreme Court's Mt. Laurel decisions of 1975 and 1983. The Court determined that every municipality in a growth area has a constitutional obligation to provide through its land use regulations a realistic opportunity for a fair share of its region's present and prospective needs for housing for low and moderate income families.[29]

The Fair Housing Act of 1985 was a companion to the State Planning Act of the same year. It established a statewide Council on Affordable Housing (COAH) with which any municipality can file a housing element to its comprehensive plan which shows how the fair share needs of low and moderate housing will be met. COAH certifies this plan and protects the city from lawsuits as long as the municipality is contributing to its allocated share of affordable housing units. The common approaches are inclusionary requirements of developers, rehabilitation and repair of existing affordable housing, and regional contribution agreements whereby up to half of its allocation can be sent to a receiving city in its "housing region."

A little less than half the state's municipalities participate in the COAH process and have provided approximately 44,000 affordable units since 1985 mostly in areas zoned for housing and infill consistent with smart growth policies. The majority of cities are vulnerable to lawsuits brought by developers to build new housing and the "remedies" they propose to provide a fair share of low and moderate housing. These developments, upheld by the courts in about ten cases, are large and often built in greenfields. For this reason, public perception exists that affordable housing is a cause of urban sprawl[30].

Housing Affordability Indicators: In Somerset County between 1990 and 2000, the median value of owner occupied housing increased by $27,600, a 14.17% increase. Similarly, the median gross rent increased by $179, a 24.90% increase. Meanwhile the median household income of the region increased by $12,350, 32.12% increase. Similarly for Middlesex County, the median value of owner occupied housing increased by $4,400, a 2.68% increase, from 1990 to 2000. Similarly, the median gross rent increased by $178, a 26.69% increase, from 1990 to 2000. Meanwhile the median household income of the region increased by $12,350, a 32.12% increase. (see Tables 12 and 13 below for details). Thus the rent to income ratio is 0.77 and 0.83 for Somerset and Middlesex County respectively. The house value to income ratio is 0.44 and 0.08 for these two counties. This means that for Somerset County, the increase in gross rent was only approximately three fourths of the increase in median household income for the period 1990 to 2000, while the increase in the value of owner occupied housing was only about half of the increase in median household income for the same period, indicating an easing of housing affordability situation for the median income level. The situation is similar for

[28] Interviews with David Listokin, Steve O'Connor at the Center for Urban Policy Research, Rutgers University and other knowledgeable land use and housing officials.
[29] Mount Laurel, 92 NJ 158(1983)
[30] Interviews with Dan Hoffman, executive director, New Jersey Coalition for Affordable Housing and the Environment.

Middlesex County, where the increase in median gross rent was about four fifth of the increase in median household income, while the increase in median owner occupied house value was less than one tenth of the increase in the median household income.

Table 12: Changes in Owner Occupied Housing Costs Related to Income in Somerset and Middlesex Counties: Years 1990 and 2000

County	Year	Median Value of Owner Occupied Housing of the County	Absolute Change in Median Value of Owner Occupied Housing from 1990 to 2000	% Change in Median Value of Owner Occupied Housing from 1990 to 2000	Median H.H. Income of the County	Median H.H. Income of the Metropolitan Region	Absolute Change in Median H.H. Income of the Metropolitan Region from 1990 to 2000	% Change in Median H.H. Income of the Metropolitan Region from 1990 to 2000	House Value to Income Ratio-Metropolitan Region
Somerset	1990	$194,800			$55,519	$38,445			
Somerset	2000	$222,400	$27,600	14.17%	$76,933	$50,795	$12,350	32.12%	0.44
Middlesex	1990	$164,100			$45,623	$38,445			
Middlesex	2000	$168,500	$4,400	2.68%	$61,446	$50,795	$12,350	32.12%	0.08

Table 13: Changes in Rental Housing Costs Related to Income in Somerset and Middlesex Counties: Years 1990 to 2000

County	Year	Median Gross Rent of Rental Housing of the County	Absolute Change in Median Gross Rent from 1990 to 2000	% Change in Median Gross Rent from 1990 to 2000	Median H.H. Income of the County	Median H.H. Income of the Metropolitan Region	Absolute Change in Median H.H. Income of the Metropolitan Region from 1990 to 2000	% Change in Median H.H. Income of the Metropolitan Region from 1990 to 2000	Rent to Income Ratio-Metropolitan Region
Somerset	1990	$719			$55,519	$38,445			
Somerset	2000	$898	$179	24.90%	$76,933	$50,795	$12,350	32.12%	0.77
Middlesex	1990	$667			$45,623	$38,445			
Middlesex	2000	$845	$178	26.69%	$61,446	$50,795	$12,350	32.12%	0.83

In the year 2000, the median value owner occupied housing was not affordable to households earning median and 80% below median household income in Somerset County. The affordability gap was approximately $1,500 for median income households and $12,000 for households earning 80% of the median household income). In Middlesex County, the housing was affordable to median income households while it was unaffordable (affordability gap of approximately $1000) for households earning 80% of the median household income (see Table 14 below).

Table 14: Affordability Gap in Median Value Owner Occupied Housing in Somerset and Middlesex Counties: Year 2000

County	Affordability Gap for Median Income Household	Affordability Gap for Households Earning 80% of the Median Household Income
Somerset	**-$1,445**	**-$11,604**
Middlesex	$11,235	**$1,076**

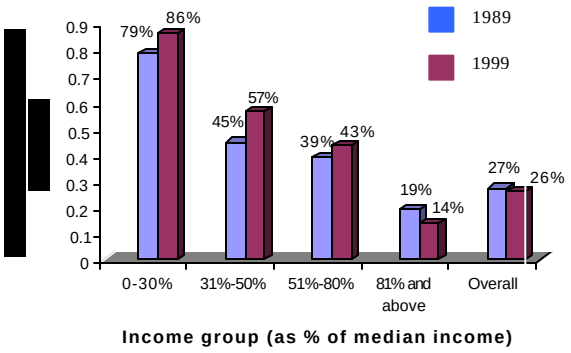
In the year 2000, for both the counties, the median priced rental housing was affordable to households earning 80% of the median household income. It was not affordable for households earning 50% of the median household income. The affordability gap in this income category was approximately $10,000 and $8,500 for Somerset and Middlesex County, respectively. (see Table 15 below).

Table 15: Affordability Gap in Median Priced Rental Housing in Somerset and Middlesex Counties: Year 2000

County	Affordability Gap for Households Earning 80% of the Median Household Income	Affordability Gap for Households Earning 50% of the Median Household Income
Somerset	$4,716	**-$10,523**
Middlesex	$6,836	**-$8,403**

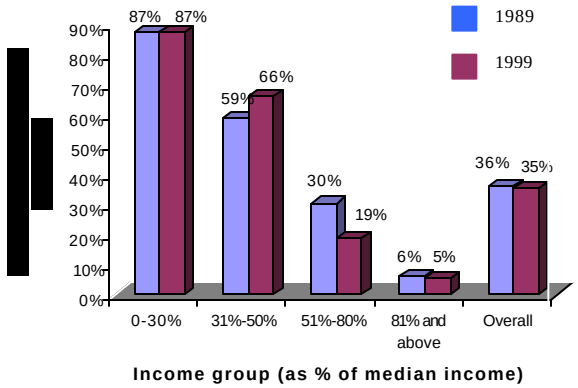
The charts below indicate the change in housing affordability for the various income groups for the two counties.

Somerset County: Proportion of Owner Households Paying more than 30% of Income for Housing Costs



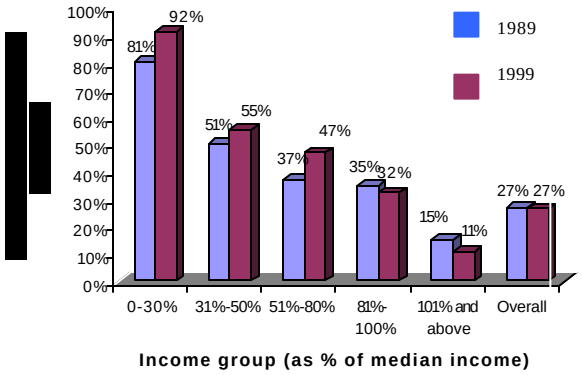
- Overall owner occupied housing affordability situation showed a slight improvement from 1989 to 1999.
- Among the below 80% of the median income groups, situation has worsened for all income groups.

Somerset County: Proportion of Renter Households Paying more than 30% of Income for Housing Costs



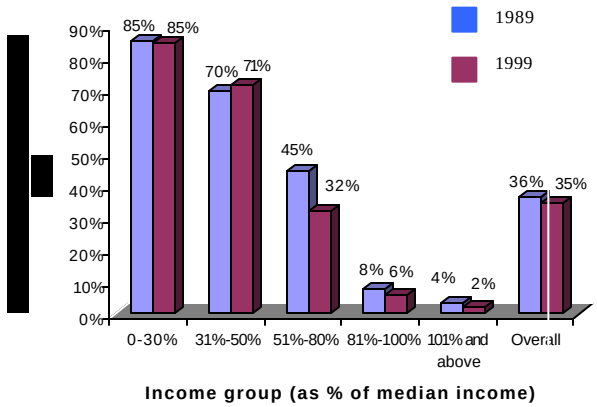
- Overall renter occupied housing affordability situation has slightly improved between 1989 and 1999.
- Among the below 80% of the median income groups, situation has worsened for the 31%-50% below median income group while it has remained unchanged for below 30% and improved for 51%-80% of the median income groups.

Middlesex County: Proportion of Owner Households Paying more than 30% of Income for Housing Costs



- Overall owner occupied housing affordability situation has not changed between 1989 and 1999.
- Among the below 80% of the median income groups, situation has worsened for all income groups.

Middlesex County: Proportion of Renter Households Paying more than 30% of Income for Housing Costs



- Overall renter occupied housing affordability situation has improved slightly between 1989 and 1999.
- Among the below 80% of the median income groups, situation has worsened slightly for the 31%-50% below median income group while it has improved for 51%-80% of the median income groups.

In summary: In Somerset County for the year 2000, the median valued owner occupied housing was unaffordable to households earning median household income. Rental housing was unaffordable to households earning 50% of the median household income. In Middlesex County, the median valued owner occupied housing was affordable to households earning 80% of the median household income. Rental housing was unaffordable to households earning 50% of the median household income. Analyzing the trends in both Somerset and Middlesex counties, between the years 1990 and 2000, the affordability of median rental and owner occupied housing has improved. Examining the housing affordability situation for below 80% of the median income households, owner occupied family housing has become less affordable over the last decade. Affordability of rental housing has overall remained largely unchanged.

Program and Policy Indicators: The strongest tool that New Jersey boroughs and townships have is the inclusionary zoning mandate that comes with plan certification through COAH. Developers typically provide one affordable housing unit for every four market rate units. Such units also have fees associated with Transportation Improvement Districts (in Somerset County) waived. Impact fees to cover costs of schools, parks and other facilities are not utilized in New Jersey. Design standards are used by some municipalities to harmonize affordable units with the prevailing market rate housing. A systematic way of tracking the length and expiration of deed restrictions on the COAH affordable housing units apparently does not exist. Some jurisdictions track this information; others are caught off guard when formerly affordable units are suddenly placed on the real estate market. Their preservation is problematic once this occurs. Both counties and multiple jurisdictions fund home rehabilitation and weatherization programs to maintain the stock of units occupied by moderate and low-income households. Flexible parking standards are employed by some jurisdictions. Cottage housing and 5 story wood frame construction does not exist, although some housing restricted to senior residents are smaller than the prevailing new home size and on smaller lots, but not as small as cottages. Accessory dwelling units are generally not permitted and while the state plan and the counties have advocated mixed use and pedestrian oriented TODs, they have not been adopted yet by any Somerset County municipality and are being explored by only two or three municipalities in Middlesex County.

Table 16. Program and Policy Table for Somerset and Middlesex Counties

	Program and Policy Indicators										
County	Cottage Housing	Transit Oriented Development	5 Story Wood Frame	Accessory Dwelling Units	Flex Parking	Impact Fees	Impact Fee Waiver	Transfer of Development Rights	Incentives	Design Standards	Preservation
Somerset	☐	☐	☐	▒	▒	▒	▒	☐	■	▒	▒
Middlesex	☐	▒	☐	☐	☐	☐	☐	☐	■	▒	▒

Key	
☐	Unavailable/ Unused by jurisdictions
▒	Used by some
■	Used by many

Affordable Housing Production: Since 1985, according to COAH reports, approximately 44,000 affordable housing units have been built or rehabilitated statewide. This represents approximately 8% of the 567,000 housing units permitted in the state during the period 1985-2002. In Somerset County 3550 affordable housing units were added from 1980-2000, representing approximately 8% of the 42,350 housing units added during the twenty-year period. In Middlesex County 6900 new and rehabilitated affordable housing units were added from 1985-2002, representing approximately 10% of the 70,000 housing units added during the period 1980-2000.[31] COAH does not track how long units remain affordable and jurisdictions often do not know when affordability commitments expire.

Under New Jersey's Fair Housing Law up to half of a community's housing obligation can be met through regional contribution agreements (RCA). This constitutes paying approximately $25,000 per unit to a 'receiving' city within the housing region. Somerset and Middlesex Counties are in Region 3 in which a total of 1437 RCA units have been transferred (out of 7882 statewide). About 80% of the RCA units in the two counties were sent to New Brunswick and Perth Amboy, two larger, older cities in Middlesex County. Somerset and Middlesex counties' RCA units accounted for approximately 1000 affordable units added to Middlesex County's affordable housing stock since 1985.

Interviews with affordable housing professionals and county planners indicate that most new development during the last twenty years of rapid growth has occurred in boroughs with available open space, not in already established cities or inner ring suburbs.[32] Over the past twenty years 21,000 acres of open space and farmland have been converted to residential building lots in Somerset County. In Middlesex County during the period 1974-1995 residential acreage grew by 10,000. Interestingly the 25,000 acre decline of farmland and vacant land was offset by a 14,000 acre increase of public open space. Neither county has an urban growth boundary or TDR program to protect farmland or open space.[33]

Comparison to a Non-Growth Management County

Montgomery County, Maryland and Fairfax County, Virginia are the two largest urban counties in the Washington, DC metropolitan area. Fairfax County does not have Montgomery County's forty-year history of growth management planning and Virginia does not have a statewide growth management law. Fairfax County adopted an inclusionary zoning law in 1991 which is similar to, though lesser in scope than, Montgomery County. Here we apply the same analytic approach to Fairfax County and then follow with a discussion of our findings.

[31] These totals do not include tax credit, HOPE VI or other affordable housing units not tracked by COAH.
[32] Interviews with Somerset County principal planner Laurette Kratina, Somerset County Affordable Housing Coalition executive director Sharon Clark, Middlesex County assistant planning director, Bill Kruse.
[33] Somerset data from Smart Growth Somerset County; Middlesex data from Middlesex County Planning Board, 2003

Fairfax County, Virginia

Fairfax County located in the State of Virginia covers an area of 395 square miles and had a population of 969,749 in the year 2000. It is the state's most populous and affluent county with a median household income of $81,050 in the year 1999.

Fairfax County adopted its first inclusionary zoning law in 1971. It was challenged and overturned by the courts that said that as a Dillon Rule state Virginia had to explicitly empower the county with such authority. Fairfax County adopted its new inclusionary zoning law, called the Affordable Dwelling Unit Program, in 1991 after the state legislature granted it authority. Like Montgomery County's MPDU it offers residential developers density bonuses for projects of more than 50 units when affordable housing units are included. Unlike Montgomery County, that requires a minimum of 12.5% of the units to be affordable, Fairfax County uses a sliding scale, adjusting the density bonus to the number of proposed affordable units. Hence, the incentive principle is the same, but its requirement is less robust.

Housing Affordability Indicators: In Fairfax County, between 1990 and 2000, the median value of owner occupied housing increased by $20,200, a 9.48% increase. Similarly, the median gross rent increased by $164, a 19.66% increase. Meanwhile the median household income of the region increased by $10,407 (see Tables 17 and 18 below for details), a 22.20% increase. Thus the rent to income ratio and house value to income ratio in Fairfax County is 0.89 and 0.43 respectively. The increase in median gross rent was nine tenths of the increase in median household income for the period 1990 to 2000, while the increase in the median value of owner occupied housing was only approximately half of the increase in the median household income for the same period. This indicates a significant improvement in the affordability of renter and owner occupied housing for median income households over the ten-year period.

Table17: Changes in Owner Occupied Housing Costs Related to Income in Fairfax County: Years 1990 and 2000

County	Year	Median Value of Owner Occupied Housing of the County	Absolute Change in Median Value of Owner Occupied Housing from 1990 to 2000	% Change in Median Value of Owner Occupied Housing from 1990 to 2000	Median H.H. Income of the County	Median H.H. Income of the Metropolitan Region	Absolute Change in Median H.H. Income of the Metropolitan Region from 1990 to 2000	% Change in Median H.H. Income of the Metropolitan Region from 1990 to 2000	House Value to Income Ratio-Metropolitan Region
Fairfax	1990	$213,100			$59,284	$46,884			
Fairfax	2000	$233,300	$20,200	9.48%	$81,050	$57,291	$10,407	22.20%	0.43

Table 18: Changes in Rental Housing Costs Related to Income in Fairfax County: Years 1990 to 2000

County	Year	Median Gross Rent of Rental Housing of the County	Absolute Change in Median Gross Rent from 1990 to 2000	% Change in Median Gross Rent from 1990 to 2000	Median H.H. Income of the County	Median H.H. Income of the Metropolitan Region	Absolute Change in Median H.H. Income of the Metropolitan Region from 1990 to 2000	% Change in Median H.H. Income of the Metropolitan Region from 1990 to 2000	Rent to Income Ratio-Metropolitan Region
Fairfax	1990	$834			$59,284	$46,884			
Fairfax	2000	$998	$164	19.66%	$81,050	$57,291	$10,407	22.20%	0.89

In the year 2000, the median value owner occupied housing was affordable to households earning median household income while it was unaffordable (affordability gap of approximately $9000) to households earning 80% below median household income. (see Table 19 below).

Table 19: Affordability Gap in Median Value Owner Occupied Housing in Fairfax County: Year 2000

County	Affordability Gap for Median Income Household	Affordability Gap for Households Earning 80% of the Median Household Income
Fairfax	$2,491	**-$8,967**

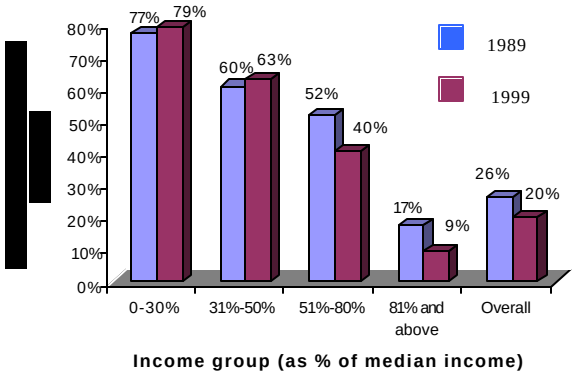
In the year 2000, the median priced rental housing was affordable to households earning 80% of the median household income. It was not affordable for households earning 50% of the median household income. The affordability gap in this income category was approximately $11,000 (see Table 20 below).

Table 20: Affordability Gap in Median Priced Rental Housing in Fairfax County: Year 2000

County	Affordability Gap for Households Earning 80% of the Median Household Income	Affordability Gap for Households Earning 50% of the Median Household Income
Fairfax	$5,913	**-$11,275**

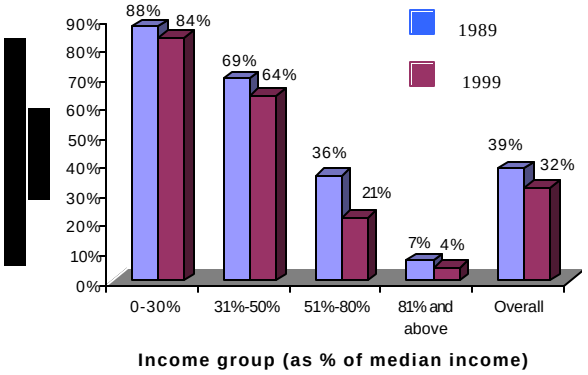
The charts below show the changes in housing affordability for various income groups.

Fairfax County: Proportion of Owner Households Paying more than 30% of Income for Housing Costs



- Overall, owner occupied housing has become more affordable in Fairfax County.
- Housing affordability for below 80% of the median income group too has not worsened.
- The improved housing affordability situation can be attributed to a large extent to the rapid increase in income.

Fairfax County: Proportion of Renter Households Paying more than 30% of Income for Housing Costs



- Overall, renter occupied housing has become more affordable in Fairfax County.
- Housing affordability for below 80% of the median income group has also improved.

In summary: In Fairfax County for the year 2000, owner occupied housing was unaffordable to households earning 80% of median household income. Rental housing was unaffordable to households earning 50% of the median household income. Analyzing the trends between the years 1990 and 2000, the affordability of both the median rental and owner occupied housing has improved. Examining housing affordability for below 80% of median income households, owner occupied housing has become marginally more affordable over the last decade. Affordability of rental housing has in general improved significantly.

Program and Policy Indicators: The one commonly used program is the Affordable Dwelling Unit program, a density bonus incentive. Impact fees are employed, but not universally and they are not waived for affordable housing; a modest amount of affordable housing is preserved through purchase by the housing authority, and accessory dwelling units are permitted but only for elderly residents. Cottage housing, TOD zoning, five-story wood frame construction, flexible parking, and TDR programs are unavailable in Fairfax County.

Table 21. Program and Policy Table for Fairfax County

	Program and Policy Indicators										
County	Cottage Housing	Transit Oriented Development	5 Story Wood Frame	Accessory Dwelling Units	Flex Parking	Impact Fees	Impact Fee Waiver	Transfer of Development Rights	Incentives	Design Standards	Preservation
Fairfax	☐	☐	☐	▒	▒	▒	☐	☐	■	☐	▒

Key	
☐	Unavailable/ Unused by jurisdictions
▒	Used by some
■	Used by many

Affordable Housing Production: Since 1991 when the ordinance went into effect, 759 rental and 971 sale units have been completed for a total of 1730 built units. An additional 500 units are approved for construction. Under the law rental affordability is controlled for twenty years and sale affordability for fifteen years. The Redevelopment

and Housing Authority may purchase up to 30% of the units as permanent affordable housing stock and has bought 41 units to date. From 1990-2002, 73,000 residential dwellings were built in Fairfax County; housing built under the inclusionary housing law represents 2.4% of that total. Affordable housing was produced through other means as well, mainly through developer proffers (negotiated developer agreements or contract zoning) and new housing developed by the housing authority itself. These additional units are estimated at 750 units, so total affordable housing units developed since 1991 are estimated as 3.4% of the total housing added during that period.[34]

Discussion

The growth management counties:
Our analysis of 1990 and 2000 census data in the Washington, Maryland and New Jersey metropolitan counties shows that **home ownership** affordability for moderate and low-income households worsened in each of the counties. **Rental housing** affordability varied, staying the same in King County, improving in Montgomery County, and worsening in Somerset/Middlesex Counties. In fast growing, affluent areas, rental housing and multi-family rental housing in particular provide the options for moderate and low-income households to live in the community. We speculate that Montgomery County's relative success in providing an adequate supply of affordable rental housing is attributable to its full palette of growth management programs, policies and laws applied over time. The MPDU program has resulted in a high percentage of built affordable housing, 11%, of new units built in the county since its inception. The law is administered in such a way that results are tracked and documented. The mandatory inclusionary zoning law does not stand alone, but exists in concert with long standing growth management policies concentrating new development in centers and serving the centers with high capacity rail service. More than any of the other counties, Montgomery employs a full complement of tools including TOD zoning, TDR, Impact fee waiver, affordable housing preservation programs and incentives. The MPDU program experienced peak production in the 1980s during rapid suburban-type expansion. Its density bonus is proving more difficult to implement in high rise-type TOD developments surrounding Metro stations as in Bethesda.

[34] Interview with Gordon Goodlett, development officer, Fairfax County Redevelopment and Housing Authority, May 6, 2003.

Table 22. Program and Policy Table for all the Counties

	Program and Policy Indicators										
County	Cottage Housing	Transit Oriented Development	5 Story Wood Frame	Accessory Dwelling Units	Flex Parking	Impact Fees	Impact Fee Waiver	Transfer of Development Rights	Incentives	Design Standards	Preservation
King	▒	■	▒	▒	■	▒	▒	▒	▒	■	■
Montgomery	□	■	□	□	■	■	■	■	■	■	■
Somerset	□	□	□	▒	▒	▒	▒	□	■	▒	▒
Middlesex	□	▒	□	□	□	□	□	□	■	▒	▒
Fairfax	□	□	□	▒	▒	▒	□	□	■	□	▒

Key	
□	Unavailable/ Unused by jurisdictions
▒	Used by some
■	Used by many

King County also utilizes a robust variety of growth management tools. While it does not have a mandatory fair share housing or inclusionary zoning law, residents of Seattle have supported affordable housing bond and levy measures every six years for the past twenty years. The political support for moderate and low-income housing extends statewide as well. Washington State's Housing Trust Fund dedicates a real estate transfer tax as a permanent source of affordable housing construction financing. King County's comprehensive plan sets targets for moderate and low income housing production (although such numbers are not a requirement of state law). The result of this political and funding support, coupled with aggressive activity by the city and county housing authorities, has been the addition of approximately 13,000 new affordable housing units or 14% of new housing in the 1990-2000 decade. Even with this production record, the county's moderate and low-income renter households have seen their affordability status stay the same.

Somerset/Middlesex counties have the fewest growth management tools at their disposal—no urban growth boundary, ADU or cottage housing zoning-- and rely on the state's COAH to monitor affordable housing compliance. In New Jersey, the emphasis on local jurisdictions capturing 'ratables' (property assessments), the absence of impact fees to pay for the costs of new development, and fears of racial and economic integration has blunted political support for affordable housing. Most observers note that senior housing is the only type of new affordable housing development tolerated as its impacts on schools and other public facilities are perceived as less than those for lower income families with children. Contrary to the intent of state planning and housing laws that attempted to reward communities for reinforcing established centers through compact new development, COAH and affordable housing is perceived in New Jersey as a *cause* of urban sprawl. An explanation for this perversion is that half the state's municipalities refused to develop plans for affordable housing, thus opening themselves to the 'builders remedy' clause of the Fair Housing Act where the housing developer, with court support, proposes how to add affordable units. This has resulted in several high profile cases where large new subdivisions, that include affordable housing, were built against the wishes of local municipalities.

Our observation is that in the growth management counties three factors-- the force of law regarding fair share and inclusionary zoning; a full range of policies and programs; and the political will and support to implement them in various combinations-- make a difference in improving housing affordability and production.

Table 23. How the Counties Compare

Rank Order	Rental Housing Affordability for 50% Median Income	Trends in Rental Housing Affordability for < 80% Median Income	Range of Policies and Programs in Use	Production of Affordable Housing as % of Total Housing
1	K	F	MO	K
2	MO	MO	K	MO
3	MD	K	S	MD
4	S	S/MD	MD	S
5 Least	F	S/MD	F	F

In Table 23 above, F stands for Fairfax County, MO for Montgomery, K for King, MD for Middlesex and S for Somerset County. The table ranks these five counties by their relative success in the following four key areas: a) affordability of median priced rental housing for households earning 50% of the median household income[35]; b) trends in housing affordability for below 80% of the median income households[36]; c) the range and utilization of growth management policies and programs they use; and d) the production of affordable housing units as a percentage to total new housing units built.

Comparison with Fairfax County:

If we compare these counties with Fairfax County, Virginia, a metropolitan county across the Potomac River from Washington, DC that has fewer growth management programs and policies (and no statewide growth management framework), we find that housing affordability for moderate and low income homeowners and renters has improved the most while the housing affordability gap remains the worst among the counties considered[37].

There are several possible explanations for this: the housing market in Fairfax County is softer than in Montgomery County; there is a greater supply of new market rate housing; residents' incomes rose faster than in other parts of the region; more land is available for residential development in Fairfax County than in the other counties. Fairfax county saw

[35] In calculation of the housing affordability gap, the median household income of the metropolitan region and the median gross rent of the county are taken into account.

[36] In calculation of the trends in housing affordability, both the income and rents are county specific.

[37] Affordability gap is measured by the additional income required by the households earning 50% of the median household income to afford median priced rental housing. The affordability gap was highest among all the counties considered. It was $9,918 in 1990 and $11,275 in 2000.

51,445 new housing units built between the years 1990 and 2000, compared to 38,909 units built in Montgomery County, 23,463 in Middlesex County, 19,370 in Somerset County, and 94,894 in King County[38]. Fairfax County's median household income of $81,000 is in fact higher than any of the other counties in this study. Lastly less land is restricted from residential development in Fairfax County than in Montgomery or King Counties.

We speculate that rapid housing growth is related to the absence of growth management efforts to concentrate urban/suburban development and maintain a balance with agriculture and open space in the county. Viewed solely through the lens of housing affordability one could conclude from our comparisons that growth management thwarts the provision of affordable housing. However, this conclusion does not factor in the benefits derived from a mix of land uses to residents' quality of life and to the environment itself.

A hallmark feature of growth management is that it seeks a balance of land use and community objectives. Toward that end we observe that regular reporting and monitoring keeps political focus on achieving growth management objectives. Both Montgomery and King Counties prepare annual 'growth reports' which document and benchmark progress toward goals including affordable housing. We also believe that the census-based affordable housing indicators developed in this paper are valuable in answering the question, 'Are we providing enough and the right kind of affordable housing options?' Knowing that an affordability gap exists in the low to moderate income household range but not the low to very low income range, for example, informs public policy about which types of affordable housing programs to fund and emphasize. The same is true for periodic testing of new growth management tools, such as cottage zoning for example, so we can understand their utility in providing infill housing in suburban and urban environments.

The suburban environments are where smart growth principles will be tried in the heat of political battle and opposition. While cottage zoning has been accepted in several Puget Sound area communities, density and multi-family housing for all but the elderly are vigorously fought in most of the townships and boroughs of Somerset and Middlesex counties. Which smart growth tools will work in the suburban infill environment? Piloting and monitoring a variety of them is an essential task to answering this paper's primary and secondary research questions. For this reason a multi-faceted approach assessing new tools, monitoring affordability and production has utility for many types of communities and jurisdictions.

Are we defining affordability right?

In this paper we define housing that costs 30% of household income as affordable. Arthur Nelson suggests that a better definition includes the average household transportation cost that he estimates at 12% of household income based on consumer expenditure

[38] The total housing units in King County were more than 2 times that of Fairfax County in 1990. Hence the increase in the housing units was higher in Fairfax County (17%), compared to King County (15%). Source for the housing unit data is U.S. Census 1990 and 2000.

survey data. Traditional metropolitan development patterns locate less expensive housing stock at the periphery where commute distances and time and travel costs are greatest. A study conducted by Kara Kockelman (1996) shows that in San Francisco, the price of the house decreases by $7,502 per mile from the central business district. Similarly study conducted by Denise DiPasquale and Matthew E. Kahn (1999) estimated that a one-mile increase in the distance from the Los Angeles central business district reduces the price of the house by 4% to 6%. Another Los Angeles Study (Burchell 2002) showed that the price of the house needs to decrease by at least 1.69% per mile as the distance from the center increased to compensate for extra cost of commuting. A Washington D.C. Metropolitan Area study (Burchell 2002) estimated that the price of the house decreased by 1.23% to 1.43% for every mile further out from downtown Washington.

The evidence from all these studies suggests that housing prices decline from the center of the city/ region. However, moderate and low-income households are caught in a dilemma: it is difficult to absorb either the costs of additional auto dependent transportation or housing costs. The lower housing costs at the metropolitan fringe, except in relatively high-cost housing markets, may not be enough to compensate for the increasing costs of commuting. We know that lower income households already practice trip reduction[39] and therefore additional travel costs will impose more of a burden. Intentionally planning to provide affordable housing through continued outward expansion is, of course, antithetical to growth management principles. If housing options were available in more compact urban form, closer to work and services, or if high capacity public transport were available, reduced transportation costs could be expected. In such a future, it would be reasonable to assign 40% or perhaps even more of household income to housing.

The concept of a Location Efficient Mortgage (LEM) combines the same factors, namely, crediting a homeowner with good access to transit or walking to work and services a larger mortgage because auto related costs decrease. Holtzclaw also found that neighborhood level residential density and availability of public transit influence auto ownership and usage. Residents of denser neighborhoods owned fewer cars and used them less.[40] The LEM approach merits broader piloting and evaluation as a tool for increasing housing affordability while implementing growth management.

Future Research:

The research question itself, the approach we have taken in answering it, and our findings lead to several areas of further research which could inform and improve efforts to implement growth management and achieve a desirable balance between affordable housing, community, and the natural environment. The first concerns suburban infill development. Which smart growth tools and approaches to compact development have greater political acceptance and the promise of adding densities? New zoning tools such

[39] Murakami, Elaine and Jennifer Young, "Daily Travel by Persons with Low Income," Paper for NPTS Symposium, Bethesda, MD, October 1997.

[40] Holtzclaw et al. "Location Efficiency: Neighborhood and Socioeconomic Characteristics Determine Auto Ownership and Use-Studies in Chicago, Los Angeles and San Francisco," Transportation Planning and Technology, 2002, Vol. 25, p 1-27.

TOD overlays and cottage zoning need monitoring and evaluation to understand what works and what does not and what can be done to capitalize on existing commuter rail lines in established cities. The second concerns affordable housing permanence. Under federal and local laws the tenure of affordable housing is between 15-20 years. In some cases there are provisions for public or non-profit entities to purchase units upon expiration of the affordability restrictions, but the percentage is limited and expiration announcements are not always anticipated. What can be done to increase not only the production of affordable housing, but also its permanence over time? The third concerns inclusionary zoning. Montgomery County is finding that the formulation of the density bonuses developed thirty years ago for suburban attached and multifamily housing do not provide the same incentives for developers of high-rise station area developments, a more mature urban form of development. Can inclusionary zoning continue to work when construction becomes more expensive and height limits are in place in TOD environments? The fourth concerns the housing/transportation nexus and the right definition of affordable housing. Should a more dynamic definition of affordable housing be employed to show relationships between access to jobs and services and relative dependence on auto travel?

The fifth concerns the relationship, over time, of the variety of policies and programs introduced in the paper to housing affordability. What is the impact of any given tool on the price of a house? To answer this it might be possible to design an econometric model to estimate the effect of an individual or group of growth management policies/ tools on the price of a house. Estimation of the effect of various factors on the price of the house has long been theoretically and empirically discussed within a hedonic analysis framework pioneered by Rosen (1974). Here the price of the house is the sum of the implicit prices of the components of the bundle of housing services rendered by a housing unit. Thus the price of the house is dependent upon its structural attributes (lot size, square feet of living space, number of bathrooms, bedrooms, topography, etc,), its locational attributes (accessibility to employments centers, traffic noise, etc.), neighborhood and jurisdictional attributes (level of service of infrastructure and other facilities, tax rates, crime rates, and other quality of life factors), regional demand and supply factors (including population growth, income growth, new permits issued, etc.), and on other policies including growth management policies and tools (Mathur, Waddell, Blanco). Some of these growth management policies/ tools may be operationalized as continuous variables, some as categorical variables and others as dummy variables, depending upon the variable of interest and data availability. For example, one such variable may be the number of accessory dwelling units permits issued per year. Thus one could estimate the affect that provision of accessory dwelling units may have on the price of the house. A set of such studies could give a fairly accurate estimate of the effect that the growth management policies/ tools will have on housing affordability.

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