

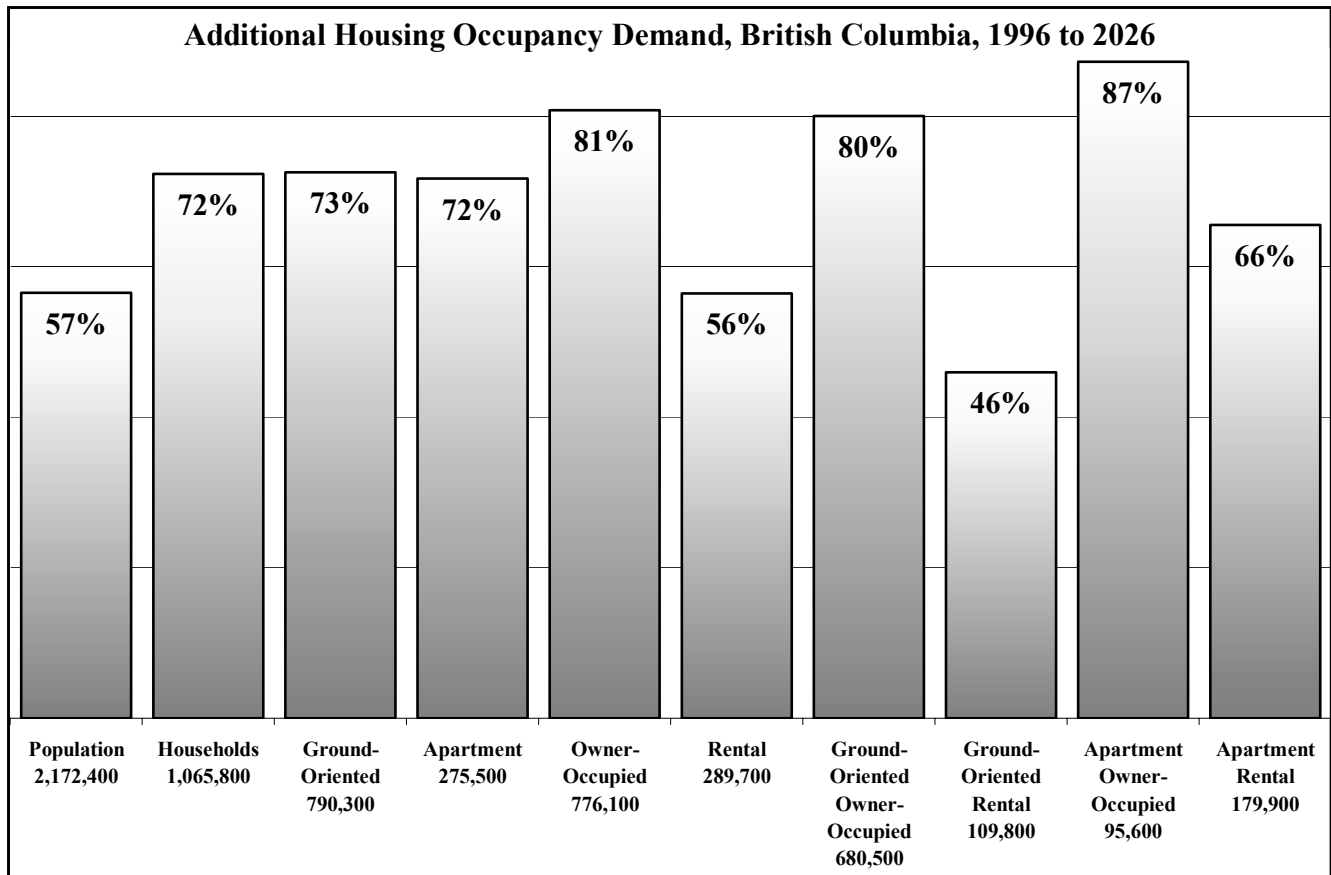
The Urban Futures Institute

Research on Population, Community Change and Land Use

Homes in British Columbia's Future: Demographics and Housing Demand, 1996 to 2026

by
David Baxter and Andrew Ramlo

September 1998



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Summary

1. Projections

Over the long run, housing occupancy demand in British Columbia will increase faster than its population, the result of the aging of the province's current residents and of the migrants who come to join these residents in the future. While population growth of 57% over the 1996 to 2021 period will establish the basis for significant increases in housing demand, demographic change will compound these increases, with these two demographic factors leading to an 88% increase in housing demand.

From a demographic perspective, the level and composition of growth in demand will be relatively consistent throughout the next three decades, with average annual growth in occupancy demand between 32,000 and 36,000 net additional households formed each year. Of this total, approximately three quarters will be ground oriented units and one quarter apartments: approximately 80% of these units will be for owner-occupancy and 20% for the rental market.

The dominant household type will be the traditional ground oriented owner-occupancy household, compatible with a population where the majority of the residents, and the growth, are between the ages of 45 and 75. Each year, approximately 23,000 additional owner-occupiers will be added to the ground oriented housing market. The second most predominant form will be the traditional rental apartment, with approximately 5,700 more rental apartment households added to the housing stock each year.

Most significant in terms of growth will be owner-occupier apartment households, which will increase by 2,700 households per year in the near term, and 3,700 per year by the end of the projection period. Finally, the rental ground oriented market will show the slowest rate of increase, with approximately 4,000 household per year added to this sector of the market.

2. Assumptions

This projection rests on two assumptions. The first is that age specific maintainer rates will remain relatively constant at their 1996 levels. This is consistent with historical patterns over the past three decades. The second assumption was that it is appropriate to use the BC Statistics PEOPLE 23 population projection. This projection indicates a long term annual population growth rate in the range of 1% to 2% that is well below the range of 2% to 4% growth that the province has experienced in the past. Within the framework of this slowing of growth, the projection shows the aging of the population that will occur over the coming decades, a situation that leads to the specific pattern of housing demand projected here.

3. The Short Run

Population growth and demographic change will ensure that housing markets in BC will have a very strong long run future, with demand for all structure and tenure types increasing over the next three decades. What about the short run? What about right now? To answer these questions requires consideration of data that concerns additions to the housing stock, not in terms of households, but in terms of dwelling units. It is necessary to consult two data sources for information on dwelling completions. The first is data on what is called the formal housing sector, that is, data on housing construction that is done with building permits, building inspectors and planning approval. Since 1988, formal sector completions have varied from a high of 42,000 in 1993 to a low of 23,000 in 1987, averaging 33,600 units per year in the past decade.

The second source is data for the informal housing development sector, that is data on housing construction that is done without building permits, building inspectors, or planning approval. As informal

development is done without official involvement, there is little in the way of official data on the extent of this market. Census data form the basis for an estimate of 3,060 units per year added to the housing stock from the informal sector as a reasonable (probably conservative) measure of the extent of this market.

During the 1992 to 1994 apartment boom, development exceeded demand: in 1993, occupancy demand increased by 39,400 households while an estimated 45,100 dwelling units were added to the housing stock. As a result, an inventory of unoccupied units built up, with cumulative overbuilding reaching a peak of 10,800 excess units in 1994. In response to this situation, building activity slowed, with the excess absorbed by mid-1996. The current situation is quite different, with there currently being a shortfall of approximately 5,500 units between development and demand: to house the current estimated population of British Columbia at 1996 household formation rates would require building activity to be 5,500 units higher than it currently is.

As all households have to be accommodated, this discrepancy suggests that:

a) the true rate of informal sector additions to the housing since 1996 has been significantly higher than the 3,060 per year estimated for the 1991 to 1996 period using the census data. As the cost gap between development in the un-permitted and permitted sector continues to widen, it is logical to expect significant increases in the informal sector as a source of housing units. To the extent that this is happening, formal sector completions data will progressively underestimate additions to the housing stock - perhaps Saturday sales of drywall should be used as a housing market indicator.

b) population growth since 1996 has been lower than is indicated by BC Statistics Population Projection. While the population projection indicated relatively slow growth of the province's population in 1997 (78,000 additional people) and 1998 (65,000 more), compared to 1994's 103,000, 1995's 94,000, and 1996's 90,000, it may well be that the actual growth in 1997 and 1998 will be below the estimated values. To the extent that these already reduced estimates of growth are above what actually occurs, housing demand will be lower than that projected using the BC Stats projections.

c) the current economic slowdown in British Columbia is pushing household maintainer rates down, with more people on average being accommodated in the average dwelling, as tenants double up, and young adults return to, or do not leave, the parental home. As was shown in the body of the report, maintainer rates fall in periods of poor economic conditions: BC is certainly in a period of poor economic conditions right now. This reduction of maintainer rates, as more people find that economics, rather than choice, determines who they live with, means that housing demand estimates based on 1996 rates will overestimate the total number of units required in the short run.

Once British Columbia is able to effectively respond to the economic challenges and opportunities it faces, un-doubling of households rising headship rates, a reduction in the relative role of the informal development sector, and population growth will lead to an expansion of development to eliminate the current shortfall, and then to expand the housing stock to accommodate current residents as their housing requirements change as well as to accommodate new comers. We can therefore anticipate housing development activity in the short run (the next two years) to be below the 33,000 units per year projected here, in the medium term (from 2000 to 2003) to be above the projected 35,000 units per year, and that the average from the next decade will be in the range of the projected 36,000 per year. Housing development and housing markets have a great long run future: the issue to create the short run conditions that will ensure that this long term future can be realized.

Homes in British Columbia's Future: Demographics and Long Run Housing Demand, 1996 to 2026

by David Baxter and Andrew Ramlo
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I. Introduction

A. Population and Housing

The extent and character of housing demand in British Columbia over the next thirty years will be primarily determined by two factors. The first will be demographics, particularly growth and change in the province's population. The second will be socio-economics, particularly people's housing preferences and the extent to which they might change over the coming years.

Population growth will be most important. The province's population is projected to grow by 2,172,500 people (57%) from 3,843,600 in 1996 to 6,016,100 by 2026: housing markets will reflect the accommodation of this growth. But growth is not the only relevant demographic factor. Changes in the age composition of the province's population will also have a significant influence on housing demand. This is the result of the strong relationship that exists between people's age, the probability that they will maintain a household, the type of dwelling that the household lives in and whether they will be renters or owners of that dwelling. For examples, in British Columbia, up to the age of 85, the older a person is the greater the likelihood that they will maintain a household; up to the age of 70 the greater the likelihood that this household will live in a single detached house or other ground-oriented dwelling; and, from age 60 on, the greater the likelihood that household will live in apartments, both rental and owner occupied.

As this report focuses on the relationship between population and housing, it uses an occupancy-based definition of housing demand. Total housing demand is here defined to be the number of dwelling units required to house the people who live in the province. Demand is thus equated with residents' occupancy of dwelling units at a point in time. A change in housing demand over a period of time is the change in the number of dwelling units occupied by the province's residents. This change will be net change, calculated by subtracting from the number of occupied residences at one point in time the number of occupied residences at an earlier point in time.

The change in occupancy demand over a period of time will not necessarily be the same as the number of dwelling units constructed during that period. Growth in occupancy demand can be met not only by new construction, but also by households occupying units that existed but were vacant at the beginning of the period. To the extent that an inventory of vacant units is reduced over the time period, occupancy demand can grow faster than new construction: to the extent that the inventory of vacant units increases over the time period, construction will exceed occupancy demand. Further, construction also includes replacements (new units constructed to replace units demolished or converted to other uses) that do not represent net additions to the housing stock.

B. Projections

A projection is a description of what the future would look like if certain things occur between now and then. While some people distinguish between forecasts, projections, and extrapolations, in fact they are all the same - statements of what might result if certain specified things happen. It would be extremely useful if projections could tell exactly what the future is going to bring, and they can, if they include everything that will affect the future, which they can't. Even in rocket science, which housing demand forecasting isn't, what is projected is not always what happens.

What is reasonably sought from projections is not that they give a precise statement of what the future will bring, but rather that they provide information about what might happen under a set of stated circumstances. Projections show us the direction and relative magnitude of the change that might occur given what we know today.

The most common reason for making projections is to anticipate situations that may arise in the future so that we can develop strategic responses to them. In one context, projections are made to help prepare for the future. For example, demographic projections of the province's population show that it is aging, with a very regular pattern of rapid increases in the number of people in the 45 and older age groups projected for the coming 30 years. Knowing this, it is possible to generally prepare for the effects that an aging population might bring, including increased tourism, higher levels of demand for health care and social services, and the need for longer walk lights and bigger print on menus.

In another context, projections are made so that action can be taken to avoid a future that might not be desired. An example of this use of projections is shown in recent changes in Canadian immigration policy. Under the conditions that prevailed in the late 1980s, projections showed that Canada's population would decline, and the percentage of the population that was retired would increase dramatically, over the next two decades. The consequences of such a situation would be very significant, including increases in per capita expenditures on, and declining contributions to, social services. After reviewing the options for changing this projected demographic pattern, the most feasible one identified was to increase the rate of immigration into the country.

C. Data Sources

The data used here on housing occupancy patterns rely on custom tabulations of data from the Census of Canada (particularly from the 1996, 1991, and 1986 Census)¹. This is the most comprehensive data available on housing and population in British Columbia. The 1996 Census also provides the most recent data on the relationship between demographics and housing. As a result, 1996 is used as the base year in the demand projections presented in this report.

British Columbia Statistic's most recent (PEOPLE 23²) population projections for the province provide the demographic projection for this report. There are three reasons for using this "third party" projection, rather than preparing it as part of this report. The first is that this projection is made and reviewed by professionals whose mandate requires that they are completely familiar with the social, behavioral, and economic factors that affect population growth and change in British Columbia. At best, preparing another set of projections would merely duplicate work that has already been done.

The second reason is that these projections are widely used in government departments and agencies, as well as in the private sector. By using common population projections, the results of the research presented here for the housing sector can be fitted into a broader context, in terms of transportation, infrastructure and commercial facilities planning. The third reason is that use of third party population projections means that the housing market analysis is kept at "arms length" from the population projection, ensuring that the housing research has the discipline of conforming to published projections for population growth.

As a final comment on the use of population projections over the 1996 to 2026 period, it is important to note that they are long run projections, giving consideration to trends and change over a number of years, rather than a number of months as is done in short run projections. As such, these projections will smooth out short-run patterns and cycles: this means that, in any one-year, the projected values may not (and most likely will not) equal actual counts. The goal of long-term projections is to capture the nature and magnitude of the direction of change in a community's population, rather than attempt to precisely forecast conditions for a particular date in the future.

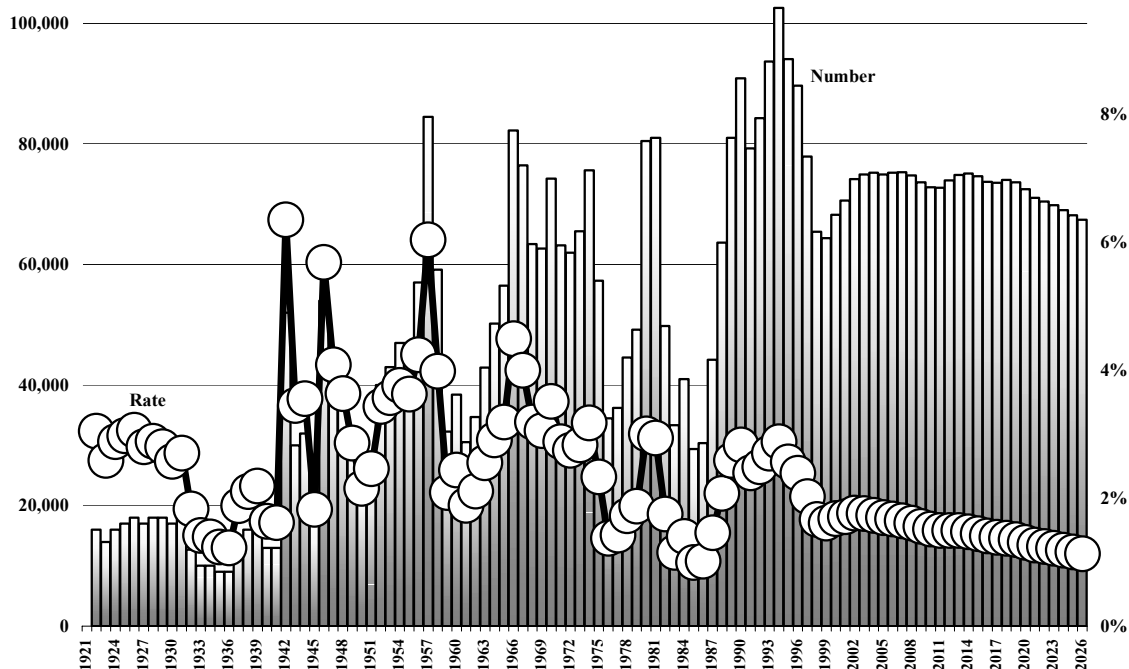
As the focus of this report is housing demand, the population projections are considered here only to the extent that they relate to housing. A brief summary of the overall characteristics of projected demographic change is presented in the following major section.

II. Population Growth and Change

A. Overall Growth

British Columbia's 1996 population was 3,843,600 people. The province's population grew by an average of 65,000 people per year over the past 20 years from 2,545,000 in 1976 to its 1996 population, at an average growth rate of 2.1% per year (Figure 1). Growth over the past decade was above that of the previous decade, with an average of 82,000 people added to the province's population each year between 1986 and 1996 (2.4% growth per year). Population growth in the 5 year period from 1991 to 1996 was still higher, with an estimated 93,000 people per year added between 1991 and 1996, an increase of 2.6% per year.

Figure 1: Net Annual Population Growth, British Columbia, 1921 to 2026



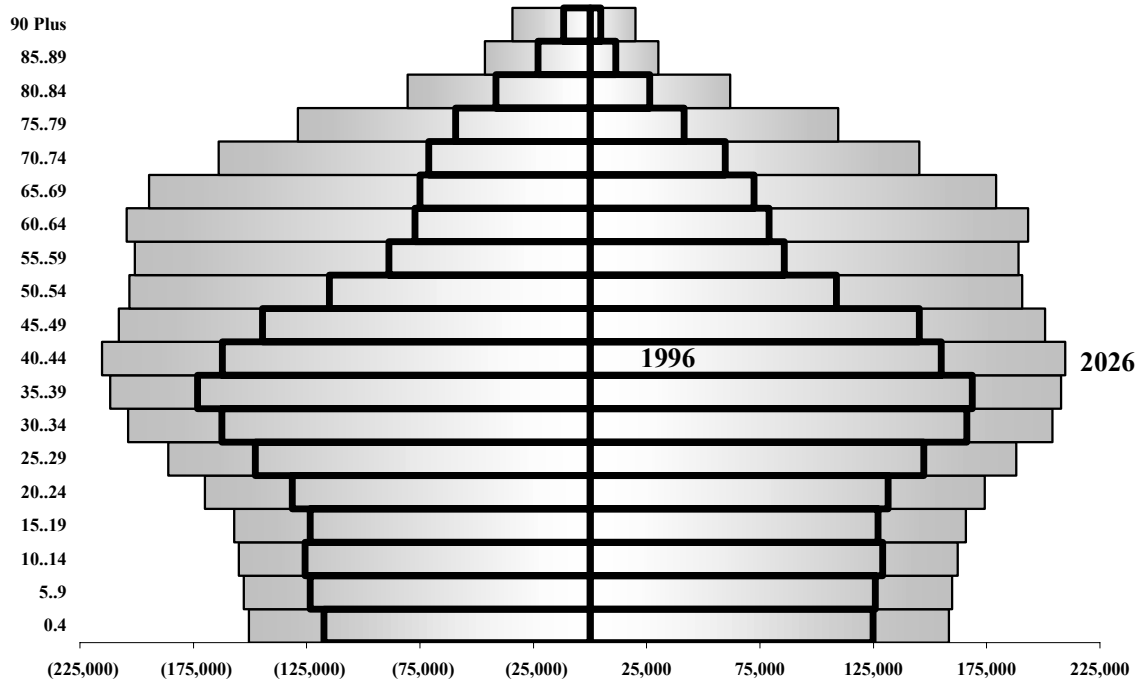
The high levels of growth of the early 1990's are will not continue: the 1996 to 2001 period is projected to see average annual growth in the range of 1.7%, with an average of 69,320 people added to the province's population each year. Over the longer term, growth is expected to average 1.5% between 1996 and 2026, adding an average of approximately 72,500 people per year. This projected growth would result in a 57% (2,172,500 person) increase in the province's population, from its current 3,843,600 to 6,016,100 in 2026.

The need to accommodate an average of 72,500 additional persons per year over the next 30 years will be one of two very significant demographic factors affecting housing demand in British Columbia. The second will be the changing age structure of the province's population, which will result in housing occupancy demand increasing faster than population growth over this period.

B. Changing Age Structure: Growth Rates

British Columbia's current population age distribution, with one third of its population between the ages of 30 and 49, demonstrates a typical baby boom generation age structure (Figure 2). Mortality, and the small number of births during the 1930s Depression and the Second World War, have made the generation before the baby boom (currently aged 50 to 69 and comprising 18% of the population) relatively small compared to the Post World War Two Baby Boom Generation. The birth control pill and urbanization made the generation born after the baby boom (currently aged 10 to 29, 27% of the provinces' population) relatively small as well.

Figure 2: Population Age Profile, British Columbia, 1996 and 2026

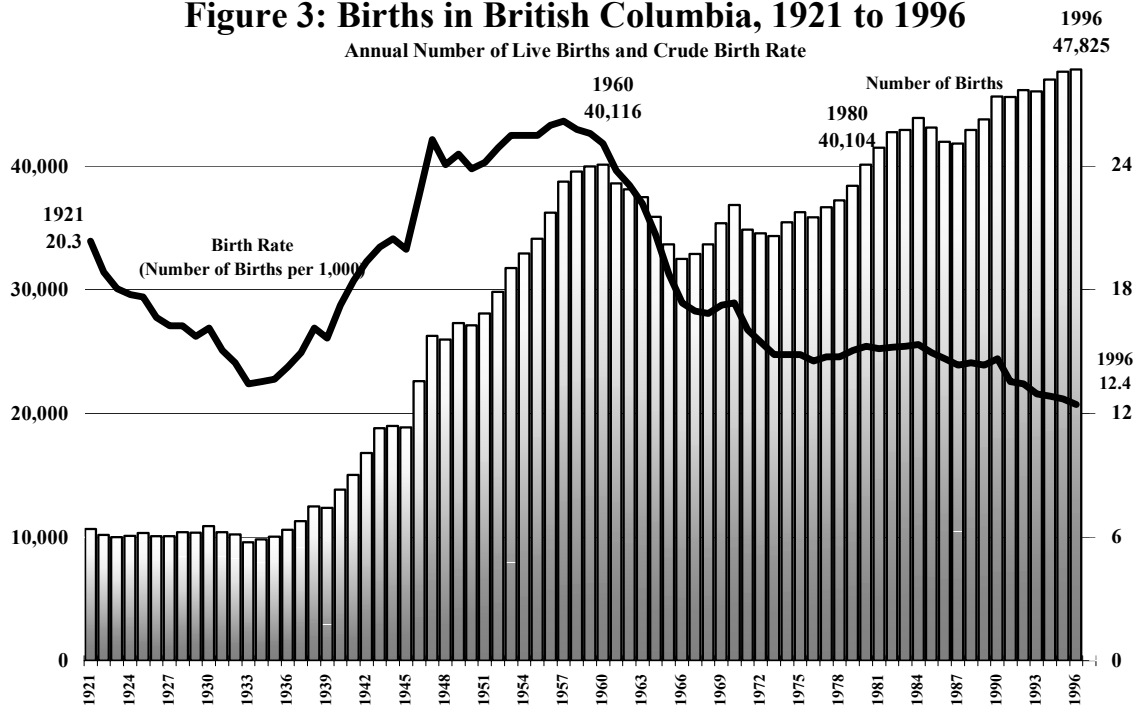


While population growth will change the size of the province's population, aging will change its age structure. In 2026, the baby boom generation will be in the 60 to 79 age group: their aging will shift the age profile of the population upwards, to the point that the 60 to 79 age group will account for 22% of the population (compared to its current 14%). In turn, the 30 to 49 age group's share will drop from its current 33% share of the population to 28% by 2026. In spite of this drop in share, the 30 to 49 age group will remain the most dominant age group in the province's population.

Aging and migration of the baby boom generation will fuel the growth of the 50 and older population in the province over the next 30 years. Aging of the record number of children born in BC since 1980, plus the generally young age profile of migrants and immigrants to the province, will cause significant growth of the under 50 population.

It is important to note that British Columbia's record number of births was not during the post-World War Two Baby Boom (the national record was set between 1957 and 1966) but rather from 1980 to 1996 (Figure 3). British Columbia has a growing younger population: in British Columbia there were 161,000 more people under the age of 15 in 1996 than there were in 1966, while there were 690,000 fewer in Canada as a whole in 1996 than there were in 1966³.

Figure 3: Births in British Columbia, 1921 to 1996



The population "pyramid" shown on Figure 2 illustrated the upward shift in the province's age profile: Figures 4 and 5 provide the numbers to compare the changes in the size of these age groups. The age groups in the province's population with the greatest number of people in 1996 were the 35 to 39 age group with 338,000 people, and the 30 to 34 age group, with 330,000 people (Figure 4) - these are the ages of the people born at the peak of the national baby boom between 1957 and 1966.

Figure 4: Population by Age Group, British Columbia, 1996 and 2026

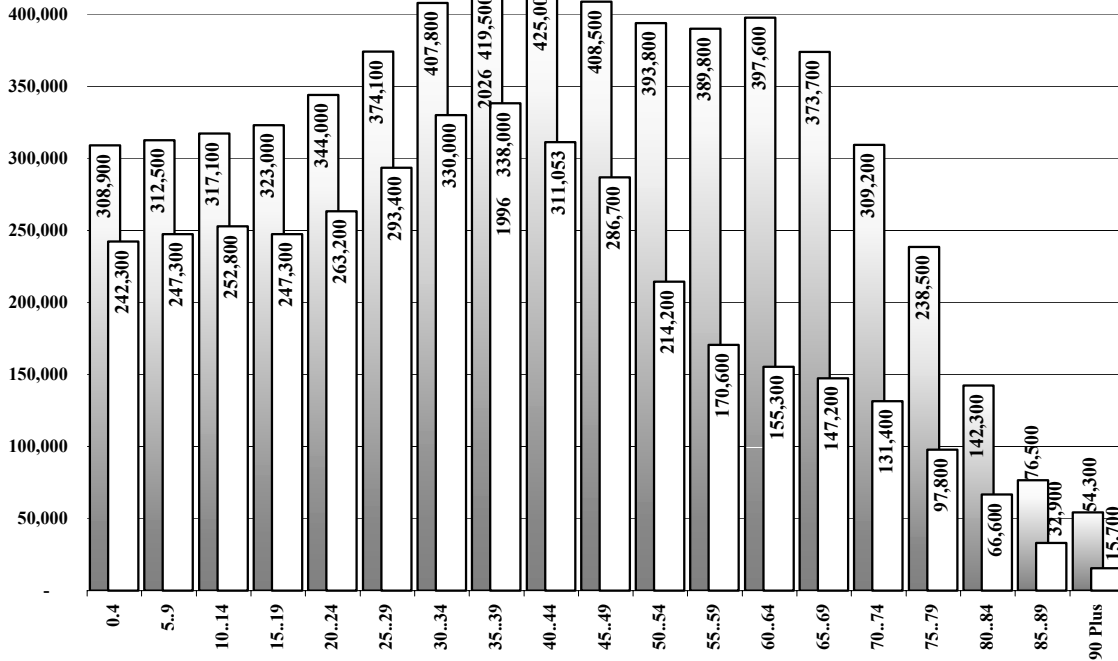
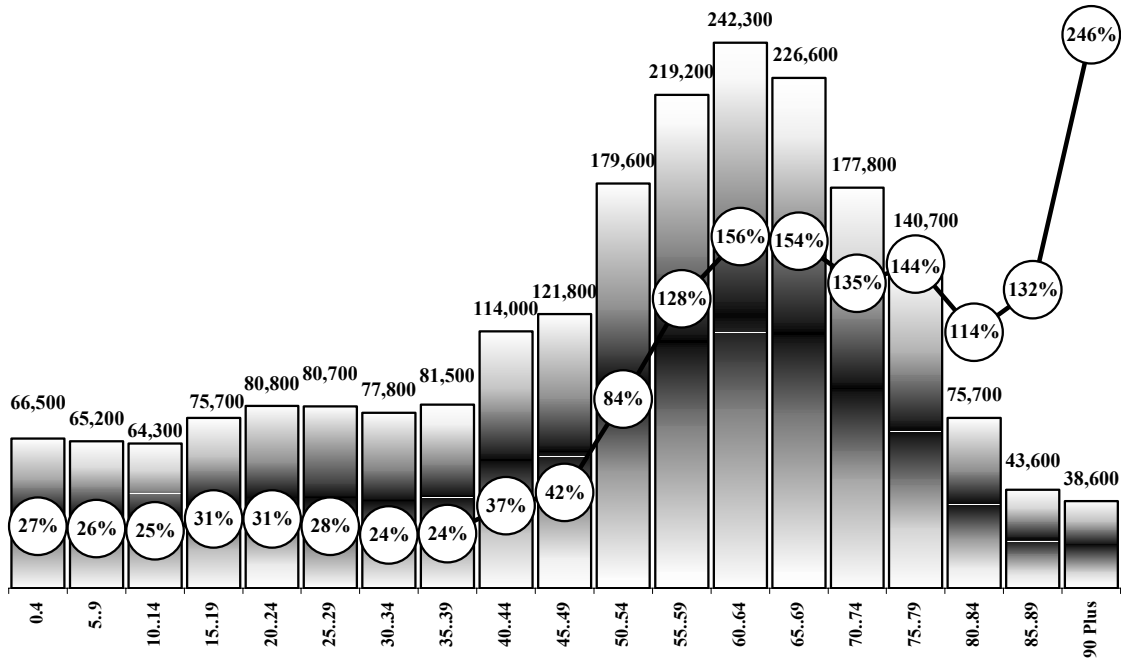


Figure 5: Total Population Growth and Growth Rates by Age Group, British Columbia, 1996 to 2026

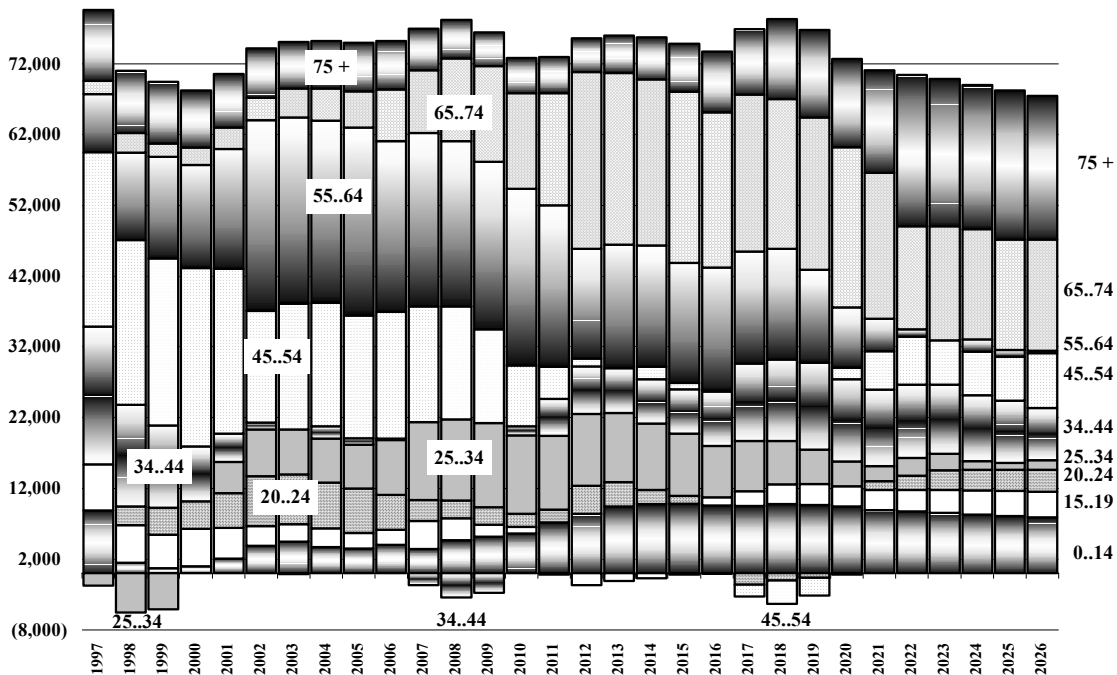


As today's 30 to 39 year olds (and migrants in the same age group) get older, they will swell the ranks of the province's older population, increasing the size of the 60 to 69 age group by 155% (Figure 5). The 242,000 person addition (156%) to the 60 to 64 age group, the 227,000 person addition (154%) to the 65 to 69 age group, and the 219,000 person addition (128%) to the 55 to 59 age group, are the largest absolute increases in the size of age groups in the province. All of the age groups 50 and older will increase by a greater than average percentage. Over 60% of the population increase over the next thirty years will be in the 50 plus age groups, which will account for 1,344,100 of the 2,172,500 people that will be added to the province's population.

All of the younger age groups will increase slower than the provincial average: the greatest increases will be in the 20 to 24 age group (80,800 people, 31%), followed by the 15 to 19 age group (75,700 people, 31%). The increase in these age groups will be primarily the result of the aging of the record number of babies born from 1980 to 1996. The 25 to 29 age group is projected to increase by 28% (80,710 people) and the 0 to 4 age group by 27% (66,520 people). The slower rate of growth in the 30 to 39 age groups is the result of low levels of births that occurred in British Columbia from 1966 to 1980, which resulted in the 10 year age group that follows the baby boomers being slightly smaller than the second half of the Baby Boom generation.

The difference between the province's age structure in 2026 and its current structure will be the result of a gradual pattern of population growth and change that will occur during the next 30 years (Figure 6)⁴. Over the next five years, most of the population growth will be in the 35 to 44 and 45 to 54 age groups, as the full baby boom generation ages into these two age groups. The 25 to 34 age group, in contrast, will decline slightly in size, the result of the smaller 10-year age group following the last of the baby boomers into the 25 to 34 age group.

Figure 6: Net Additional Population by Age Group, British Columbia, 1996 to 2026



From 2001 to 2011, the pattern of rapid growth will shift to the 45 to 54 and 55 to 64 age group, following the aging of the boomers into this stage of the life cycle. The 35 to 44 age group, in its turn, will decline slightly in size as the last of the boomers age out of it, while the 25 to 34 age group will start to grow again as the 1980 to 1996 generation starts to age into this stage of the life cycle. Near the end of this period, the 65 to 74 group will start to experience significant increases as the first of the pre-boomers, thanks to increased life expectancy⁵, age into this stage of life.

From 2011 to 2021, population growth will be concentrated in the 65 to 74 age group, the result of the front edge of the baby boom aging into this age group, and in the 55 to 64 age group, growing as a result of the aging of the second half of the baby boom generation. This aging will, in turn, bring modest declines to the size of the 45 to 54 age group, as the last boomers leave it and first post-boomers age into it. In the 2021 to 2026 period, the aging pattern shifts growth upwards once again, into the 75 and older age group (the first of the boomers turns 75 in 2021), while the aging of the last of the baby boom babies ensures that the size of the 65 to 74 age group continues to increase (as it will until 2031).

With this very strong age related pattern of population change, it is reasonable to anticipate equally strong pattern of change in markets where there are age specific patterns of demand. As the next section demonstrates, housing demand is very closely related to age, and hence much of what will happen in British Columbia's housing markets can be predicted by linking population projections and housing market behaviour.

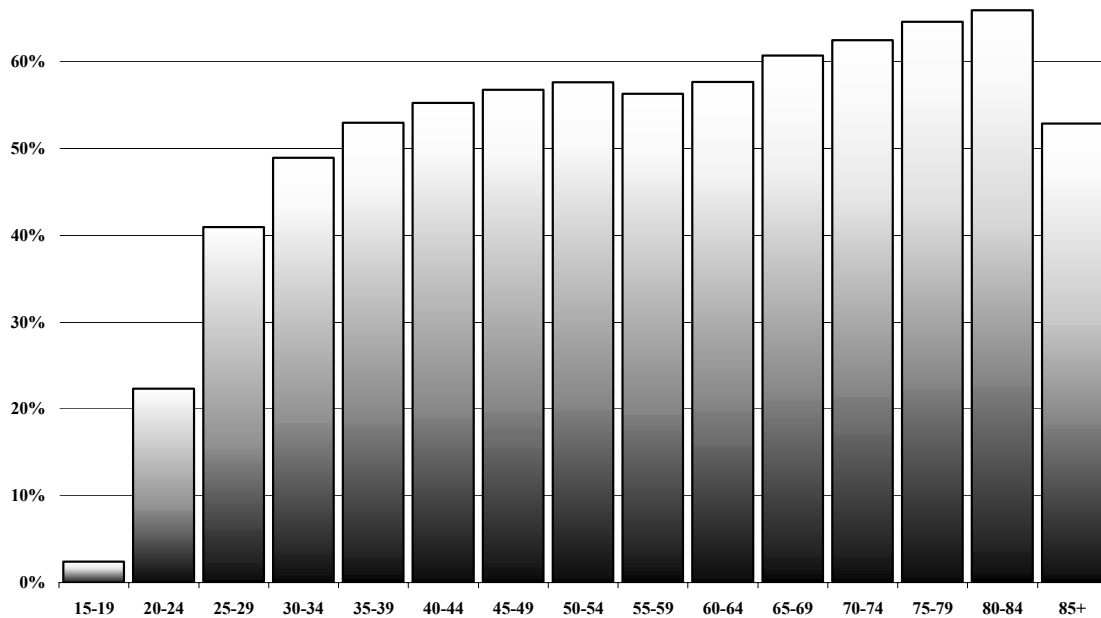
III. The Age Specific Pattern of Housing Demand

A. Age Specific Household Maintainer Rates

The connection between housing demand and the age composition of the population is shown in the percentage of people in each age group who are "household maintainers". In the census questionnaire used to gather data on housing, each group of people living together in a dwelling unit (a household) is asked to indicate the age (and other attributes) of the person they consider to be primarily responsible for the financial support of the household. This person is referred to as the (primary) household maintainer: the percentage of people in each age group who are household maintainers is referred to as the household maintainer rate.

There is a strong relationship between age and the household maintainer rate (Figure 7). The 1996 Census data for British Columbia show that only 2% of the people in the 15 to 19 age group are household maintainers: most of the people in the age group, and all of the people in the 0 to 14 age group, are living in households maintained by someone else (one or more of their parents). A greater percentage of people in the 20 to 24 age group have left the parental home to establish their own households, with 22% of the people in this age group being household maintainers. There is also a significant increase in the rate as people move into the next age group, with 41% of the people in the 25 to 29 age group, and almost half (49%) in the 30 to 34 age group, being household maintainers. In the 35 to 85 plus age groups, more than half of the people are household maintainers, with the percentage increasing from 53% in the 35 to 39 age group to 66% in the 80 to 84 age group, then declining suddenly to 53% in the 85 and older age group (when there is a shift from maintaining ones own household to living with others, either in a private household, or a care facility).

Figure 7: Age Specific Household Maintainer Rates, British Columbia, 1996



The pattern of household maintainer rates increasing with age has significant implications for housing demand. Consider the example of 1,000 people in the 15 to 19 age group: there would be only 20 households maintained by people in this age group. Five years later, when these 1,000 people had aged into the 20 to 24 age group, they would maintain 220 households, and, in another five years, when they aged into the 25 to 29 age group, they would maintain 410. Over a ten-year period, the occupancy demand from the same 1,000 people would have increased by over 2000%, from 20 units to 410 units. This is what happened in the late 1960s and 1970s as the post World War Two baby boom generation moved out of their parents homes and into their own housing: between 1966 and 1976, the number of households in British Columbia grew at almost twice the rate of population growth (52% compared to 31%).

The probability of a person being a household maintainer continues to increase from the 25 to 29 age group to the 80 to 84 age group, but the increases between age groups are much smaller than those seen in the 15 to 19 and 25 to 29 age groups. For example, 1,000 people in the 45 to 49 age group will maintain 570 dwellings, while 1,000 in the 80 to 84 age group will maintain 660: this means a 16% increase in housing demand, simply as a result of aging of the population. The fact that maintainer rates increase with age means that housing demand will continue to grow faster than the population over the coming 30 years: the fact that the increases are small after age 35 means that the difference will not be great as it has been in the past.

B. Structure Types

It is important to know the definitions used in the data to define housing structures before using structure type specific maintainer rates. The great diversity of housing types people live in may be classified into two major structural types, ground-oriented and apartment. The typical ground-oriented dwelling is the single detached house with its front door opening onto a lawn, its rear door opening onto a yard, with side yards separating it from other dwellings, and only one group of people (one household) living in it. The essence of this form of dwelling is living at ground level, with doors and windows that open out onto yards. The dwelling unit that one household lives in is not attached to that of another household: units are not “stacked” so no household lives above/below another, and, thanks to the sideyards, they are not joined on the sides.

There are other dwelling types that share with the single detached house the direct access to yards but where there is no side yard between one dwelling unit and another. This type of housing is referred to attached ground-oriented. It includes the side by side duplex (referred to in census tabulations as a double house or semi-detached), where dwelling units are on the ground with doors and windows that open onto yards on three sides, but where the fourth side is attached to another unit (or a non-residential building in what is referred to as single attached units). This category also includes row houses, where on the ground dwelling units are attached to other units on both sides. (Moveable and mobile homes are also generally included in this category, even though they are structurally more similar to single detached, as they generally do not have the yard characteristics of single detached units.)

The apartment category includes dwellings that are not only attached side by side, but also are stacked one on top of the other. As a result of being stacked, individual dwelling units do not have entrances that open onto a yard, but rather have entrances that open onto a corridor, with households sharing a common access to the yard and street. The typical examples of apartment dwellings are in multi-unit apartment buildings of 5 or more storeys (high-rise buildings) and in buildings of less than 5 storeys (low-rise buildings). In both cases, the defining features are many units in one building, units attached to other units not only on two sides but above and below as well, unit entrances by way of shared corridors, and no direct access to yards.

There are two additional types of housing that, depending upon design, may be considered to be either ground-oriented or apartment units. The first is the up/down duplex, a two-unit structure with units stacked one on top of the other. The second is the suite in a house. As these units are stacked, they have the characteristics of apartments. However, they often have direct access to a yard, rather than sharing a corridor entrance, and hence are somewhat like ground-oriented units. It would be most appropriate to include up/down duplexes in the ground-oriented category and suites in the apartment category. This is not possible, as in census data these two types are aggregated to the category “apartment or flat in a detached duplex”. In this report, these units are included in the ground-oriented category.

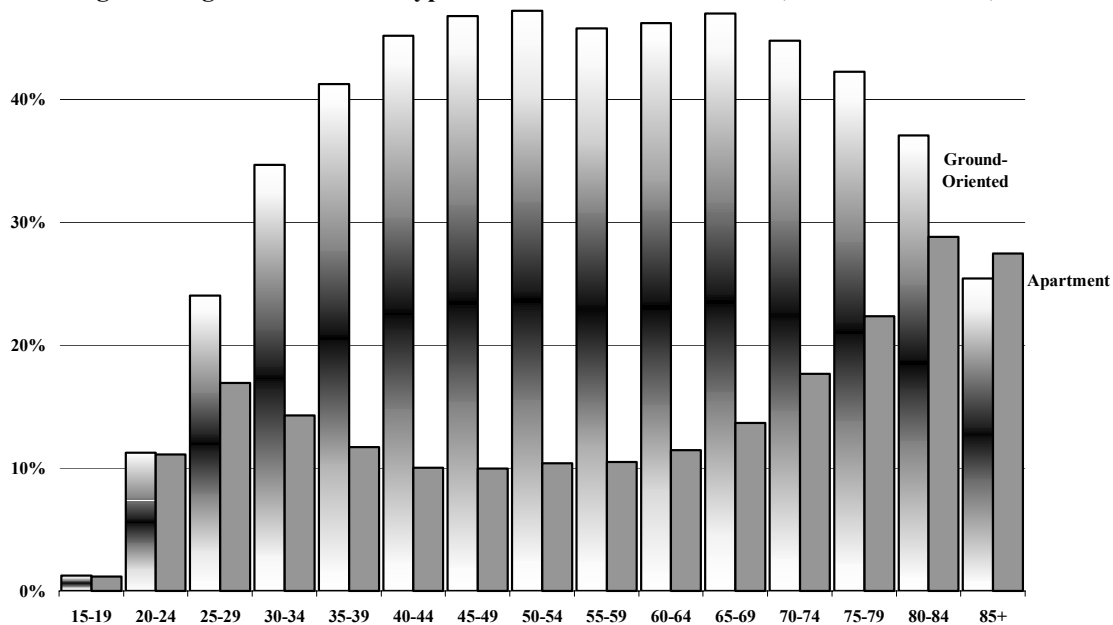
Dwelling units are grouped together into major groups to reflect the degree to which households may be willing to substitute one structure type for another. For example, a household realistically seeking a single detached unit may, because of budgetary or locational factors, have to consider alternatives to this most preferred form of dwelling. The closest alternative form, in terms of living experience, would likely be a side by side duplex. If this were not available or affordable, the next alternative would be a row house. In each of these structure types the household could still find some of the ground-oriented characteristics of the single detached house. If the

household was realistic about its initial expectations of living in a single detached dwelling, it is not likely that it would consider an apartment in a multi-unit building as a substitute, but rather would seek ground oriented housing in a more affordable location. The boundary between major structure types is between “stacked unit corridor entrance” apartments and the “door on the yard” ground-oriented unit.

C. Age and Structure Type Specific Maintainer Rates

There is a distinct relationship between a household maintainer's age and the structure type that the household lives in (Figure 8). A person in BC is more likely to be the maintainer of a household living in a ground-oriented unit than one living in an apartment unit in every age group except the 85 plus age group. There is some similarity in structure type maintainer rates in the 15 to 19 age group (1.18% for apartments, 1.23% for ground oriented) and in the 20 to 24 age group (11.09% for apartments and 11.26% for ground-oriented), but in all other age groups except the 85 plus, ground oriented maintainer rates are much greater than the rates for apartments.

Figure 8: Age and Structure Type Household Maintainer Rates, British Columbia, 1996



The 25 to 29 group marks one transition in occupancy patterns, the widening of the gap between apartment and ground oriented rates: 24% of the people in this age group are maintainers of households in ground-oriented units, and 17% in apartments. From this age group to age 50, there is an increasing likelihood that a person will be the maintainer of a household in a ground-oriented unit and a decreasing likelihood that they will maintain an household living in an apartment.

In the 50 to 54 age group, 47% of the population maintains households living in ground-oriented accommodation, and only 10% in apartments. This age group marks the second transition, with ground oriented maintainer rates beginning to decline and apartment rates beginning to increase for the rest of the age groups.

In the 80 to 84 age group, while a person is still more likely to be a maintainer of a household living in a ground-oriented unit than an apartment, the difference is under 10% (37% for ground oriented compared to 29% for apartments). In the oldest, 85 and older, age group, a person is slightly more likely to be the maintainer of a household living in an apartment unit (27%) as they are to be in a ground oriented unit (25%). The highest apartment maintainer rate of all the age groups is found in the 80 to 84 age group where almost 29% of the people in this age group maintain apartment units: the 37% ground-oriented maintainer rate, while lower than that of the 35 to 74 age groups, is still higher than that for the under 35 population.

The significance for future housing demand of this age specific pattern of household maintainer rates is readily apparent. The two age groups that are projected to have the largest absolute increases in size over the next 30 years (the 60 to 64 and 65 to 69 age groups) are the ones that have among the highest ground-oriented maintainer rates and an increasing propensity to live in apartment units. Clearly, housing demand in British Columbia over the next 30 years will be dominated by the demand for ground-oriented housing. Having said this, the fact that apartment maintainer rate increases from the 50 to 54 age group on means that there will also be strong growth in demand for apartment housing, the result of the combination of significant growth in the number of people in these age groups and the increasing apartment maintainer rates.

Are these rates likely to change dramatically in the future? No, not if history provides any guidance. As Figures 9 and 10 show, age and structure type specific household maintainer rates in British Columbia were relatively stable over the three and one half decades between 1961 and 1996⁶, and particularly stable in the post 1971 period.

Ground-oriented maintainer rates (Figure 9) in British Columbia increased during the 1961 to 1996 period, with the rates recorded in 1996 in all age groups being above those of 1961. 1981 marked the high point in ground oriented maintainer rates for most age groups, the result of the economic boom and unconstrained urban growth that occurred in the 1970's. The recession of the 1980's, and the increasing density of the province's urban areas, resulted in a general decline in the ground-oriented maintainer rates for the under 45 population from 1981 to 1996. In contrast, the ground oriented maintainer rates for the 55 to 64 and 65 plus age groups in 1996 were equal to or higher than their 1961 to 1991 maximums. Urbanity, chosen or imposed, is slowly reducing the ground oriented households maintainer rate for the younger population in BC while older age groups have been able to hold their own. Having said this, there is not a great deal of difference shown between the rates for 1961 and those for 1996: for all practical purposes, age specific ground oriented maintainer rates have been constant over the past 35 years.

The economic boom of the seventies not only permitted the 25 to 64 age groups to have their highest ground-oriented maintainer rates in 1981, but they also permitted them to have relatively low apartment maintainer rates that year (Figure 10). The effects of the 1980's recession and increasing urbanization meant that apartment maintainer rates in 1991 and 1996 were higher than they were in 1981. Relative to 1961, apartment maintainer rates were significantly higher in 1996, reflecting the significant urbanization of the province, and the significant increase in one-person households that accompanied this urbanization, in the post war period. While these rates generally increased throughout the period for the 25 to 54 age group, they have been stable, or declining, for the 55 and older population.

Figure 9: Household Maintainers, % of Age Group, Ground Oriented, British Columbia, 1961 to 1996

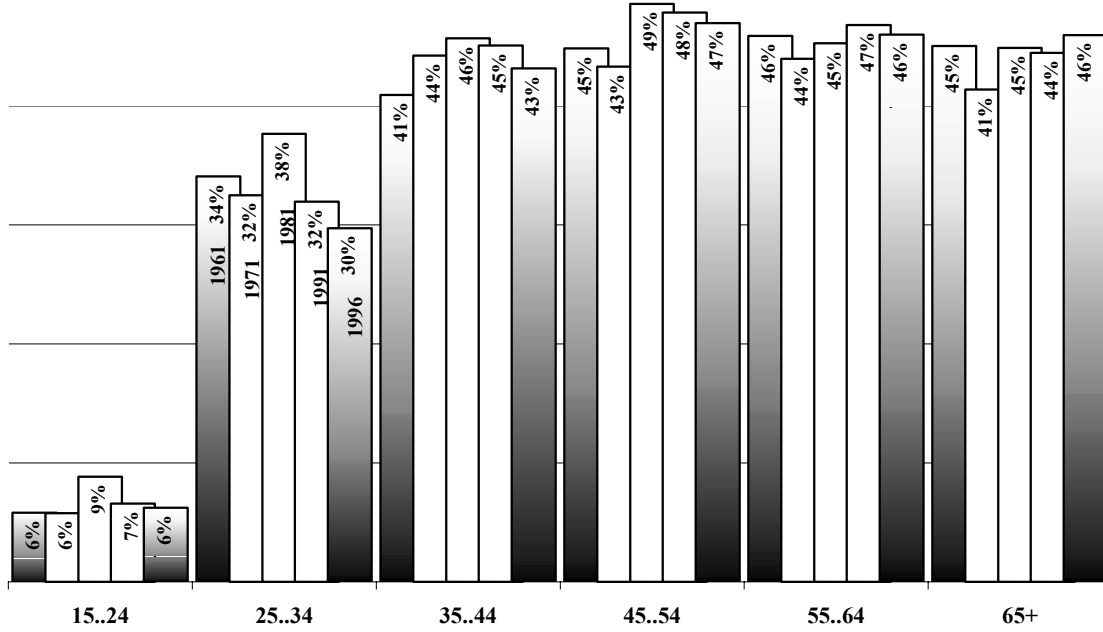
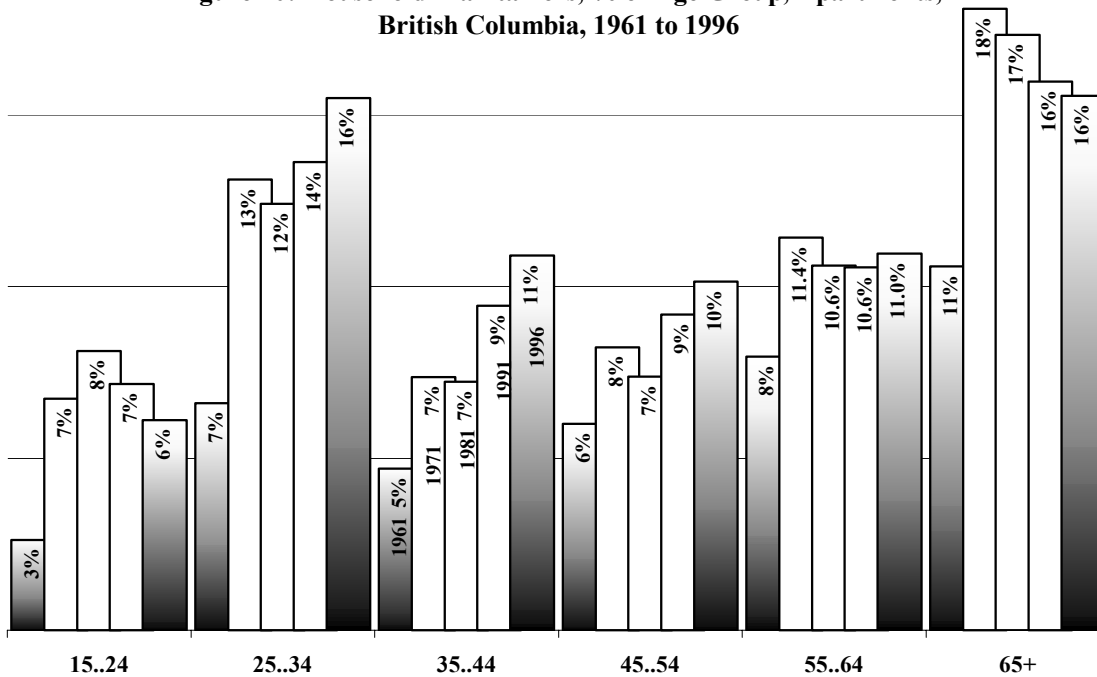


Figure 10: Household Maintainers, % of Age Group, Apartments, British Columbia, 1961 to 1996



The economic boom of late 1970s also meant that people in 1981 the 15 to 24 age groups could have their highest household maintainer rates ever, the result of their record high apartment (8%) and ground-oriented (9%) maintainer rates. Both the apartment and ground-oriented rates for this age group were considerably below their 1981 peak in 1996.

The 65 and older age group shows a pattern that is not as directly related to economic cycles in the province. Between 1961 and 1971, increasing urbanization, higher divorce rates, and increasing life expectancy all lead to apartments playing an growing role in the housing of the 65 and older population. 1971 also marked the peak in this role, with each successive period showing a decline in apartment maintainer rates for this age group towards 1996's 16%. As Figure 9 shows, 1971 also marked the low (41%) in the propensity of seniors to live in ground oriented accommodation, with 1996's 46% of the 65 and older population maintaining households living in ground oriented housing marking the high point for this rate. The increasing health of the seniors' population means that they are, and will increasingly be, able to maintain ground oriented accommodation.

With continued urbanization in British Columbia, there exists the grounds to argue that the trend towards decreasing ground oriented maintainer rates, and increases in apartment maintainer rates, will continue. If these occur, they are likely to be marginal, as is shown by the relatively small changes in rates between 1991 and 1996. The 1996 rates are used here as being representative of stable, long-term average, age and structure type specific maintainer rates: while there will be short term cyclical variations, history indicates that there is not likely to be major behavioral change beyond that which has already occurred. Changes are now much more likely to occur within the major structure types (for examples, from large lot single detached to small lot and row housing, or from apartment units in low rise buildings to those in high rise units) than between them⁷.

D. Tenure Types

The stage in a person's life cycle – essentially their age – is overwhelmingly the major determinant of both the probability that someone will maintain a household and the type of dwelling the household lives in: it is also the major determinant of whether the household rents or owns the unit it occupies. Financial resources are strongly correlated with stage in the life cycle, and hence there is an age-related pattern to housing occupancy by tenure.

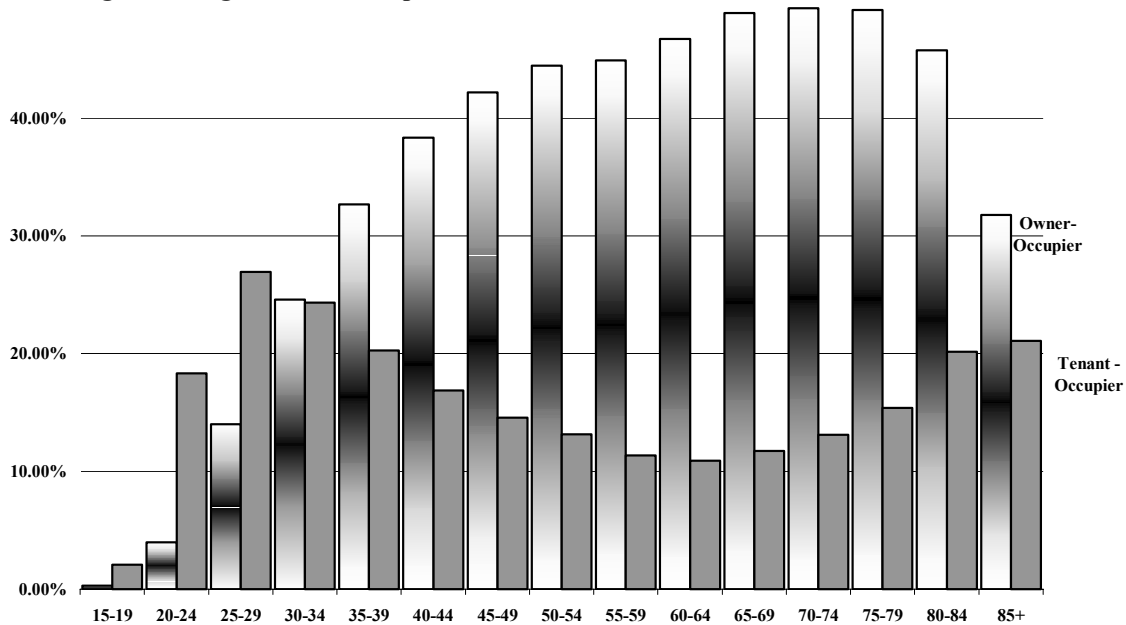
The two tenure categories used in this analysis are owner-occupier households and rental, or tenant occupier, households. Owner occupancy means that the one or more people who own title to the property are also members of the household that occupies the dwelling. First nations or band housing is also included in the owner-occupancy category, even though, strictly speaking, the occupants of the housing do not hold title, in the usual sense, to the dwelling. Such housing is included as owner occupied because it functionally is owner-occupied. Note that "condominiums" are a type of ownership that can be used for a unit of any structure type, including single detached houses. Condominiums are not necessarily apartments, apartments are not necessarily condominiums, owner occupied apartments are almost always condominiums, and condominiums can be either owner or tenant occupied.

Rental housing is not occupied by any one of the persons who own it, but rather is leased by the occupants from the owner either on a short or long term basis, the most common arrangement being where the accommodation is obtained in exchange for monthly rent paid to a landlord.

E. Age and Tenure Specific Maintainer Rates

The percentage of people in an age group who maintain households living in owner-occupier accommodations increase significantly with age, from its extremely low 0.3% of the people in the 15 to 19 age group to a high of 49% in the 70 to 74 age group (Figure 11).

Figure 11: Age and Tenure Specific Household Maintainer Rates, British Columbia, 1996



It is in the younger population that tenants are found, with 2% of the people in the 15 to 19, and 18% in the 20 to 24, age groups maintaining households living in rental housing, 4 to 6 times the percentage for owner-occupier housing. In the 25 to 29 age group, the ratio is about 2 to 1 with maintaining 27% tenant occupier households and 14% maintaining owner-occupier households.

It is in the 30 to 34 age group that owner occupancy for the first time edges by rental tenure, with 25% of the population in this age group maintaining owner-occupier households and 24% maintaining tenant occupier households. From this age group on, up to the 60 to 64 age group, the maintainer rates for rental occupancy decline. In contrast, rates for owner occupancy continue to increase, reaching a peak of 49% in the 70 to 79 age groups.

The 60 to 64 age group marks a turning point, showing the end of the decline of rental tenure rates, and the beginning of an increase that almost doubles the rental tenure rate from 11% in the 60 to 64 age group to 21% in the 85 plus age group, the highest apartment maintainer rate outside of the 25 to 34 age groups. For the first time in the aging process, the owner-occupier maintainer rate declines after age 75, falling to 32%, the lowest rate seen in 35 and older age groups.

The high degree of rental tenure in the younger age groups is the result of young people having fewer economic resources and a wide range of choices (and variability) in their lives. Highly mobile, in terms of jobs, housing and relationships, this population needs the low entry, occupancy and exit costs offered by rental housing. As people age, a greater stability, in terms of jobs, housing and relationships, comes into their lives, along with increased personal and household incomes. The result is an increasing shift to owner-occupancy through their working years and into the early stages of retirement. Death of a spouse, income constraints, and a need to convert capital to income result in an increase in rental tenure in the older age groups.

Tenure and age specific maintainer rates have also demonstrated relative stability over the past 35 years (Figures 12 and 13). 1981 marked a high point in owner-occupier rates for the under 55 population, the consequence of the same factors that resulted in the 1981 peak in ground-oriented maintainer rates (Figure 12). The recession of the 1980s and the relative slow (in the historical context) growth in the early 1990s meant that ownership rates in 1996 for the under 55 age groups were lower than they were in 1981 and 1991. Most of the decline occurred from 1981 to 1991, with the rates remaining essentially constant from 1991 to 1996. Quite a different pattern is apparent for the 55 and older age groups, where the likelihood of maintaining an owner occupier household increased steadily, and to record levels, from 1971 to 1996.

The fact that British Columbia's economy was not as strong in 1991 or 1996 as it was in 1981 is also shown in the fact that the peak apartment maintainer rates for the 25 to 54 age groups occurred in 1996 and in fact the maintainer rates for the 15 to 24 age groups for both ownership and rental were below 1981's level in 1996. In the 55 and older age groups, in contrast, rental maintainer rates in 1996 were at their lowest level for the post-1961 period. It is extremely significant that the 12% of people 65 years of age and older who maintain tenant occupied households is the lowest percentage observed in the post war era.

As with the structure type rates, historical trends indicate that there may be some short run decreases in ownership rates, and increases in rental occupier rates, due to the continued slowing of the British Columbia economy in the late 1990s. These changes are likely to be modest, with the rates that have generally prevailed since 1991 being characterized as stable or stabilizing. For the purposes of this report, age and tenure specific maintainer rates are assumed to be constant.

Figure 12: Household Maintainers, % of Age Group, Owner-Occupiers, British Columbia, 1961 to 1996

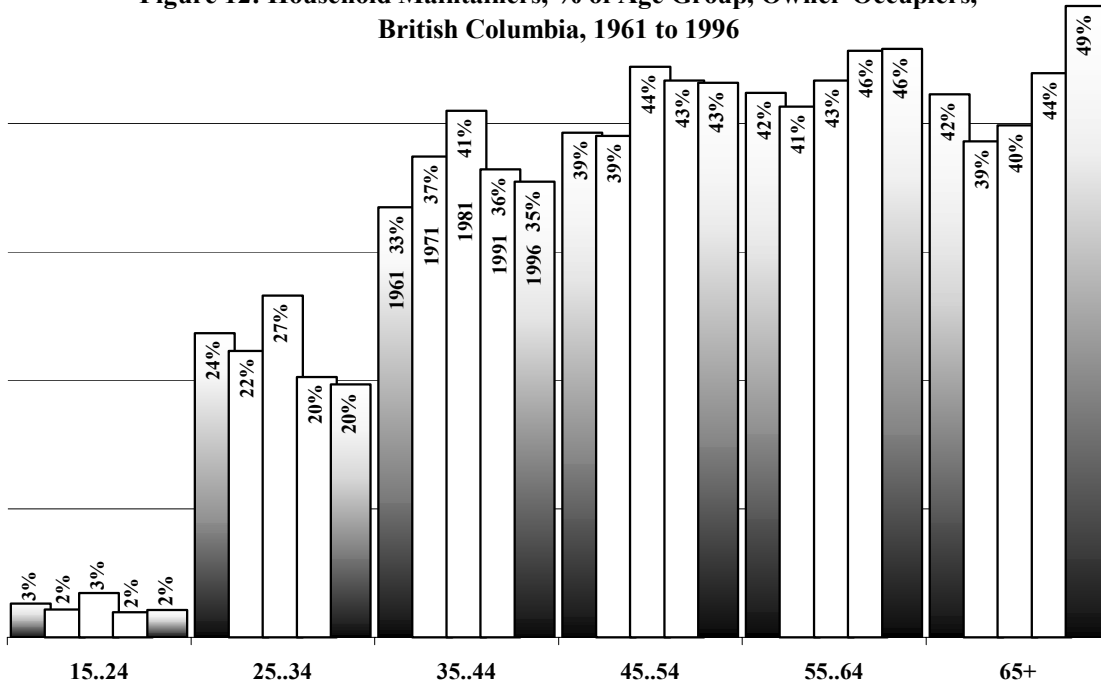
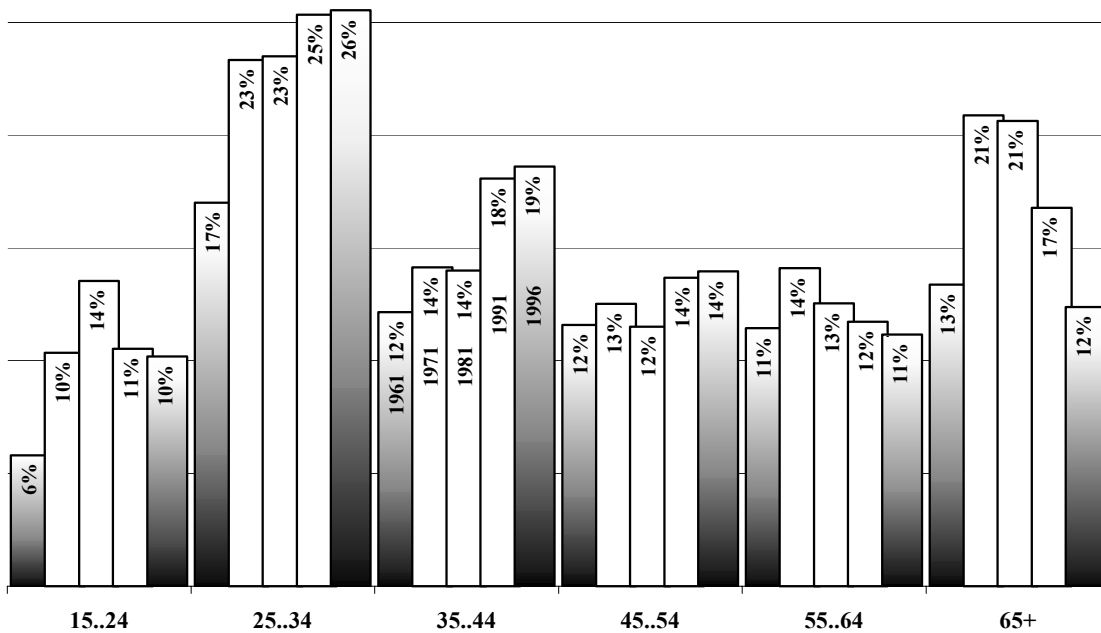


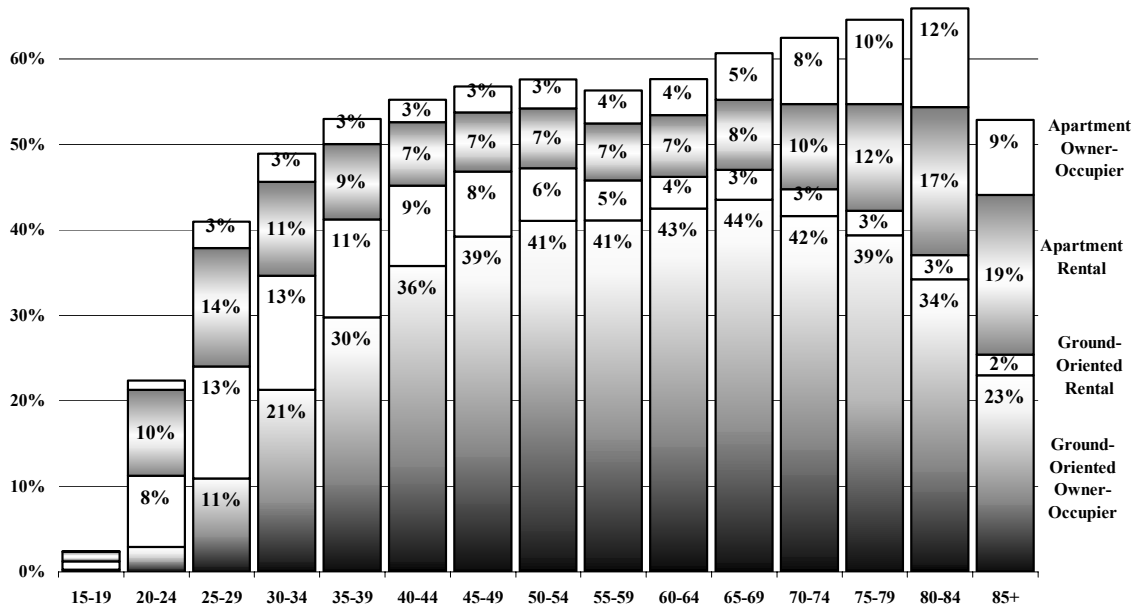
Figure 13: Household Maintainers, % of Age Group, Tenant Occupiers, British Columbia, 1961 to 1996



F. Tenure and Structure Type Specific Maintainer Rates

Having considered the life cycle of housing demand by structure types and by tenure separately, the next step is to put the two concepts together to examine occupancy of the structure types by tenure. As might well be expected, is a distinct pattern to tenure by structure type and age (Figure 14). For example, the 20 to 24 age groups 11% maintainer rate for the ground-oriented housing is overwhelmingly rental tenure: 8% of the people in this age group maintain household living in ground-oriented rental accommodation, while only 3% maintain households living in owner-occupied ground-oriented units. Its 11% rate for apartments is also overwhelming for rental, with 10% maintaining households living in rental apartments and only 1% maintaining households living in owner-occupied apartments.

Figure 14: Age, Tenure & Structure Type Maintainer Rates, British Columbia, 1996



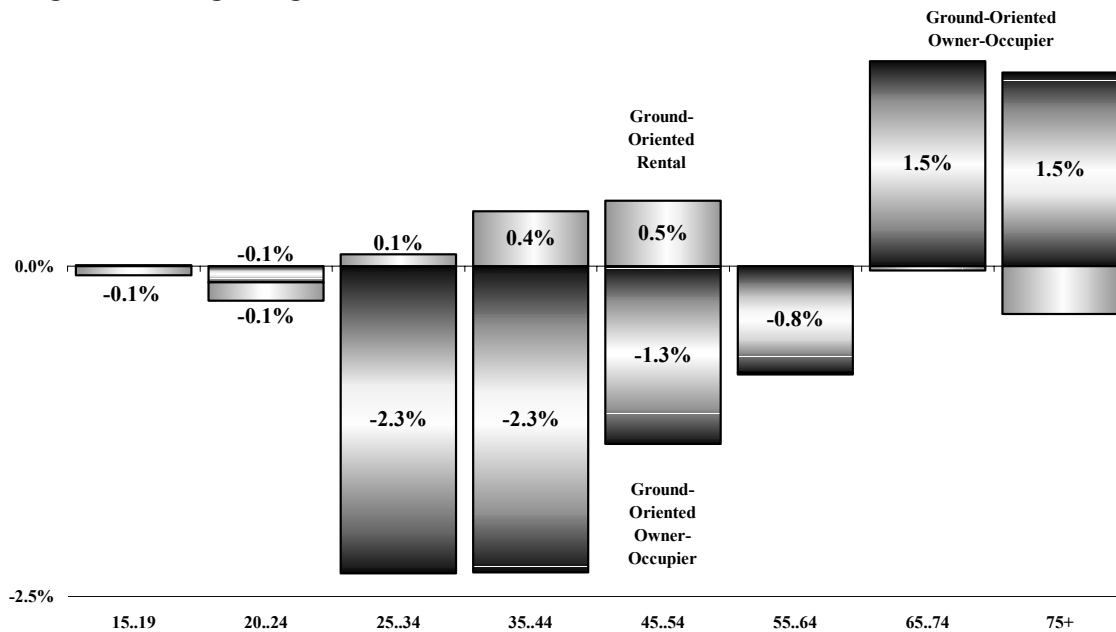
The situation is reversed in the 30 to 34 age group, where 21% of the population maintain households living in owner-occupied ground-oriented accommodation, while only 13% maintain households living in rental ground-oriented accommodation, only 11% maintain households in rental apartments, and 3% in owner-occupied apartments. Thus this age group may be seen as the transition stage between renting and owning ground-oriented housing. Never again in the life cycle do owner-occupier ground oriented maintainer rates fall below the 30 to 34 age group's level.

Note that throughout the life cycle, while owner occupancy of ground-oriented housing is the norm (from 30% to 45% of the people in the 35 to 79 age groups are maintainers of households in owner occupier ground-oriented housing), there is always a significant percentage of people who maintain households living in ground-oriented housing, but occupy it as tenants (from between 2% to 12% in the 30 plus age groups). Financial constraints, employment mobility and life style objectives will always combine to ensure a market for the rental ground oriented, even in a market where the owner occupied unit is both the norm and the goal.

In 1996, the apartment market in British Columbia was overwhelmingly for rental occupancy. In the 25 to 29 age group, for example, 14% of the people maintain households living in rental apartments, more than 4 times the 3% rate for owner occupied apartments. Only in the 55 and older age groups is there a significant level of apartment owner-occupancy. In the 55 to 59 age group, 4% maintained apartment owner-occupiers households compared to 7% for apartments in rental occupancy. This apartment owner occupancy rate increases with age, to 5% in the 65 to 69 age group, to 10% in the 75 to 79, and then drops slightly to 9% in the 85 and older age group. The aging of BC's population holds enormous promise for the condominium apartment market.

Historical data do not permit examination of long term changes in tenure and structure type age specific maintainer rates. Data available from custom tabulations from the 1991 and 1996 Census permit general consideration of the short-term trends that prevailed over this period.

Figure 15: Change in Age, Tenure & Structure Maintainer Rates, British Columbia, 1991 to 1996



As was discussed earlier in this section, ground oriented maintainer rates declined slightly between 1991 and 1996: the rate for the 15 to 19 age group declined by 0.1%, the 20 to 24 age group declined by 0.2%, the 25 to 34 age group declined by 2.2%, the 35 to 44 age group dropped by 1.9%, the 44 to 55 age group declined by 0.8%, the 55 to 64 group dropped by 0.8% while the 65 to 74 age group grew by 1.5% and the 75 plus age group experienced a similar 1.5% increase.

This general pattern masks some significant shifts in the tenure by which these ground oriented units were occupied. People in the 25 to 54 age groups were more likely to rent ground oriented and less likely to be owner-occupiers of ground oriented units in 1996 than they were in 1991 (Figure 15). For example, the ground oriented rental maintainer rate for the 25 to 34 age group increased by only 0.1% to 2.8%, while that for ground oriented owner occupancy declined by 2.3%. In contrast, the ground oriented owner occupancy rate increased by 1.5%, and that for ground oriented rental occupancy decreased by 0.4% in the 75 plus age groups.

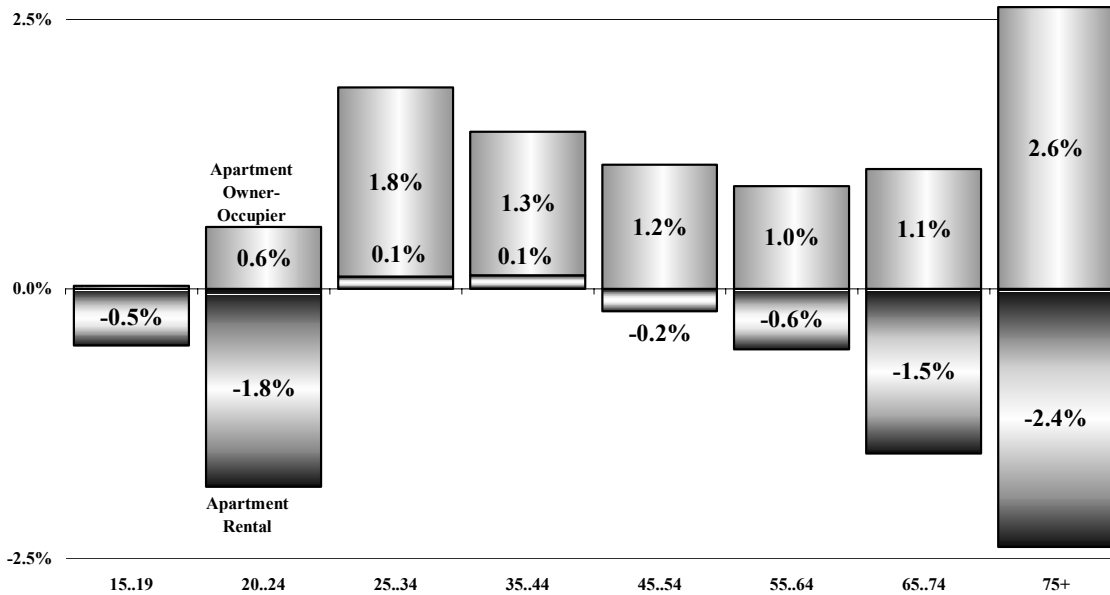
Increasing urbanization, with declining accessibility and affordability, pushed ground oriented owner-occupier maintainer rates down for the under 65 age groups, while the rates increased for the older age groups. The shift, however, was not into ground oriented rental, but into apartments.

Within the apartment market a shift rather than a reduction occurred (Figure 16). Overall apartment maintainer rates increased between 1991 and 1996, except in the under 25 groups (a 0.5% decline in the 15 to 19 groups and a 1.3% decline in the 20 to 24 age group), and 65 to 74 age group (a 0.4% decline). In the 25 to 34 group, there was a 1.9% increase, a 1.4% increase in the 35 to 44 group, a 1% increase in the 45 to 54 group and a 0.1% increase in the 75 plus group.

All of the increases in apartment maintainer rates were the result of growth in the propensity to be apartment owner occupiers: in every age group apartment owner occupancy maintainer rates increased, by as much as 2.6% in the 75 plus age groups and by over 1.0% in all of the 25 and older age groups. In the under 25 and 65 and older age groups, these increases were paralleled by almost equal declines in rental apartments maintainer rates in. In contrast, in the 25 to 64 groups, either modest increases or slight decreases in the rental apartment maintainer rate were recorded.

Thus the effects of the condo apartment boom of 1991 to 1996 was not uniform across all age groups. In the 25 to 64 age groups, condominium tenure increases were not the result of tenants shifting to be owners (as there was no decline in rental maintainer rates to match increases in owner occupier maintainer rates) but rather a result of a decline in ground oriented rates. In the under 25 and 65 plus age groups, however, much of the growth in apartment owner occupancy was overwhelmingly at the expense of rental apartment rates.

Figure 16: Change in Age, Tenure & Structure Maintainer Rates, British Columbia, 1991 to 1996



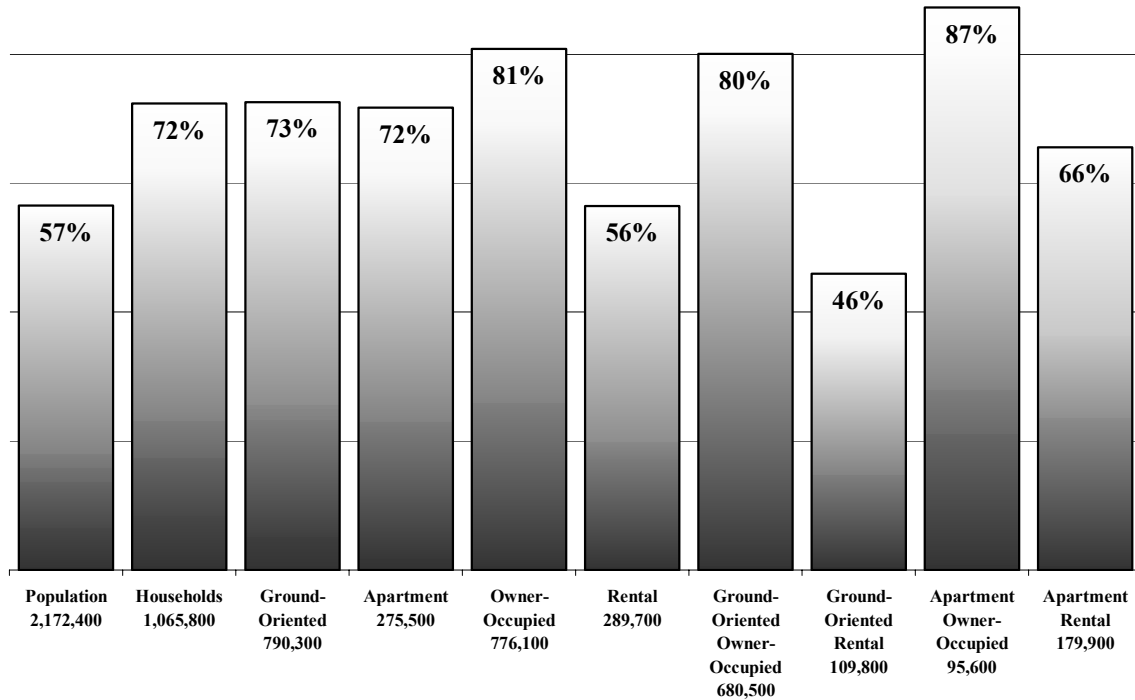
Based on the characteristics of maintainer rates presented in this section, it is reasonable to assume that maintainer rates will remain in the general range indicated by the 1996 Census. In the next section of this report, the rates shown in Figure 14 will be used, together with the British Columbia Statistics PEOPLE 23 population projection, to estimate the future occupancy demand for housing, by structure type and tenure, in British Columbia, from 1996 to 2026.

IV. Housing Demand in British Columbia, 1996 to 2026

In demographically based housing demand projections, it is common to assume that age specific maintainer rates remain as they were at the last available census: in this case, these are the 1996 age, tenure and structure type maintainer rates shown on Figure 14. This constant rate assumption focuses projections on the consequences of population growth and demographic change on the housing market. Taking constant rates and multiplying them by the projected number of people in an age group in the future results in the estimated number of dwelling units that would be required if people in each age group in the future were to be housed with the same occupancy pattern as people in the age group are today.

The result is a projection that the net occupancy demand for housing in British Columbia will increase by 72% between 1997 and 2026: there will need to be 1,065,800 more dwelling units added to the housing stock in British Columbia to accommodate the 2,172,400 person (57% percent) increase in population (Figure 17).

Figure 17: Additional Housing Occupancy Demand, British Columbia, 1996 to 2026



The reason that the growth rate in the demand for housing is considerably higher than that of the population as a whole is that the 45 and older age groups – those with the highest household maintainer rates – will grow much faster than the overall population, the result of the aging of British Columbia's population that will occur over the next three decades.

Given the facts that the 50 to 74 age groups have the highest ground-oriented household maintainer rates, and that these age groups have the greatest projected absolute and percentage growth, it comes as no surprise that the greatest increase will be in the demand for ground-oriented accommodation. There will be a net increase in ground-oriented housing demand of 73%, with 790,300 additional ground-oriented units occupied over the next 30 years. The apartment stock will increase by 72% (275,500 units), a slightly slower increase than for ground oriented units, but still faster than population growth. This growth in apartment demand will be driven by the growth in the 50 and older age groups, where age specific increases in apartment maintainer rates occur.

Not surprisingly, given the strong preference for owner occupancy of both ground oriented and apartment units in the 50 and older age groups, demand for owner occupier housing will increase much faster (81%) and by many more units (776,100) than will the demand for rental accommodation (56% and 289,700 units) which will just keep pace with population growth.

The greatest absolute increase in housing demand in BC over the next three decades will be the 680,500 additional ground oriented units for owner occupancy: this will account for almost two thirds (64%) of the total increases in demand for housing between 1996 and 2026. The demand for ground-oriented rental accommodation, while increasing by 109,800 households, will grow slower (46%) than that for other household types, and slower than the population as a whole. This is the result of the relatively slow growth in the under 45 population (and particularly in the 20 to 35 age groups) where the highest ground-oriented rental household maintainer rates are found.

The relatively high levels of apartment owner occupancy in the rapidly growing 55 and older age groups mean that demand for owner-occupied apartment condominiums will increase rapidly: an 87% increase (95,600 units) may be anticipated over the next 30 years. Demographic change will also lead to an increase of 66% (179,900 units) in the rental apartment stock.

This demographically based projected growth in housing demand shows a relatively steady pattern of annual increases in housing occupancy demand, with between 32,000 and 36,000 additional occupied dwellings added to the housing stock each year (Figure 18). The somewhat smaller increases in the 1998 to 2001 period (32,000 to 35,000 per year) are the result of the projected slow population growth in this period, as is the slowing in increased in demand after 2016.

In the first decade of the projection period, demographic change will focus demand on the ground-oriented sector, with annual demand for 27,100 ground oriented and 8,500 apartment units (a 76% to 24% split) between 1996 and 2006 (Figure 19). During the last decade of the projection, the mix would have changed, with the annual growth in demand being comprised of 70% (24,900 units) ground oriented and 30% (9,800 units) apartments. The aging of the BC's population will push apartment development to record levels, in both absolute and percentage terms.

In terms of tenure, population growth in the older age groups will maintain the focus on owner-occupier units, with about 26,500 net additional owner occupied units, and 9,200 rented units demanded on average each year in the 1996 to 2026 period (Figure 20). In the decade from 1996 to 2006, approximately 25,800 additional owner occupied and 9,800 rental units will be occupied each year. By the last decade of the period the annual average growth in occupancy demand will

be comprised of 25,400 owner occupied and 9,300 rental units. Aging will keep a relative balance to the owner-occupier and rental markets, with owner-occupier households accounting for approximately 72%, and rental households approximately 28%, of increases in demand.

Figure 18: Projected Additional Housing Demand, British Columbia, 1996 to 2026

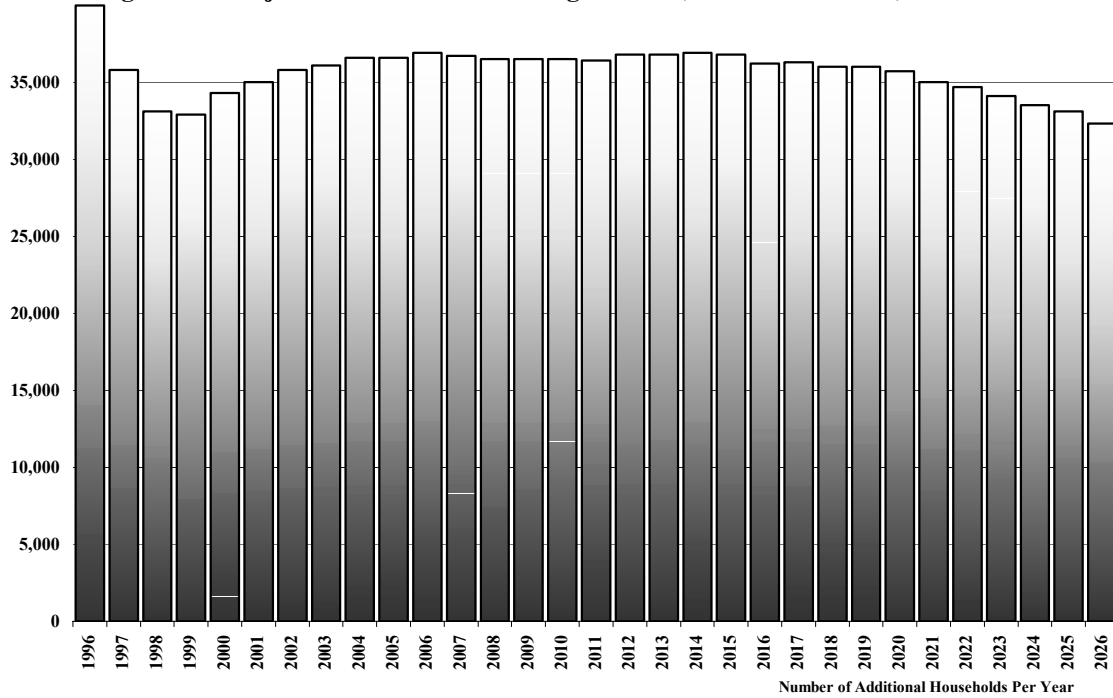


Figure 19: Projected Annual Additional Housing Demand by Structure Type, British Columbia, 1996 to 2026 (Number of Additional Households)

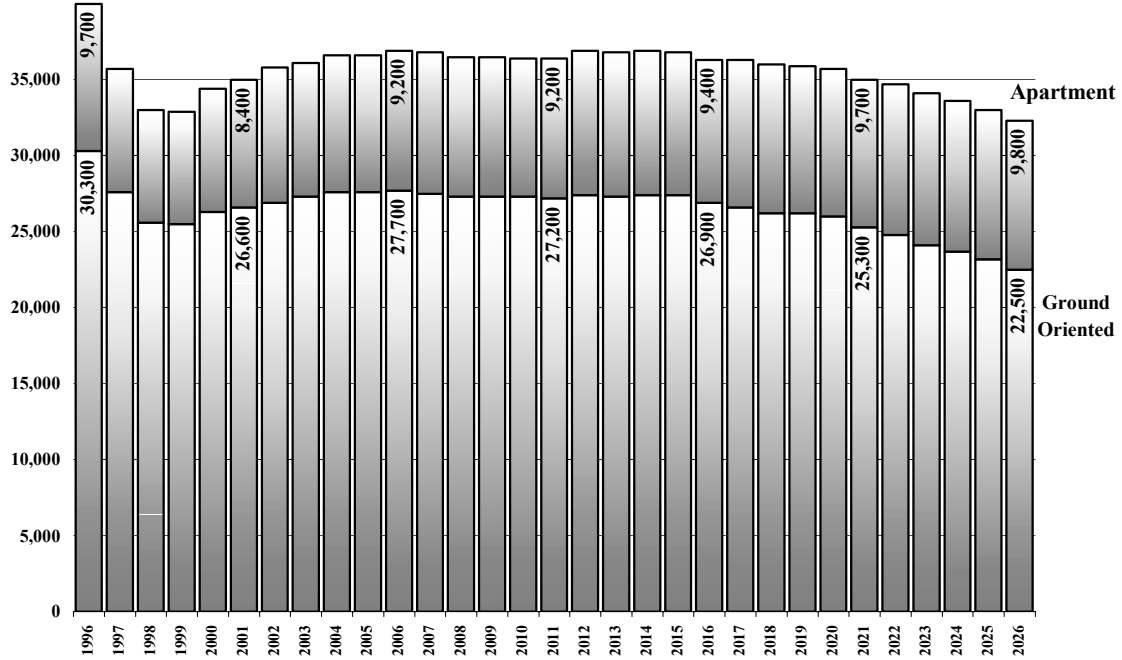


Figure 20: Projected Annual Increase in Housing Demand by Tenure Type, British Columbia, 1997 to 2026 (Number of Additional Households)

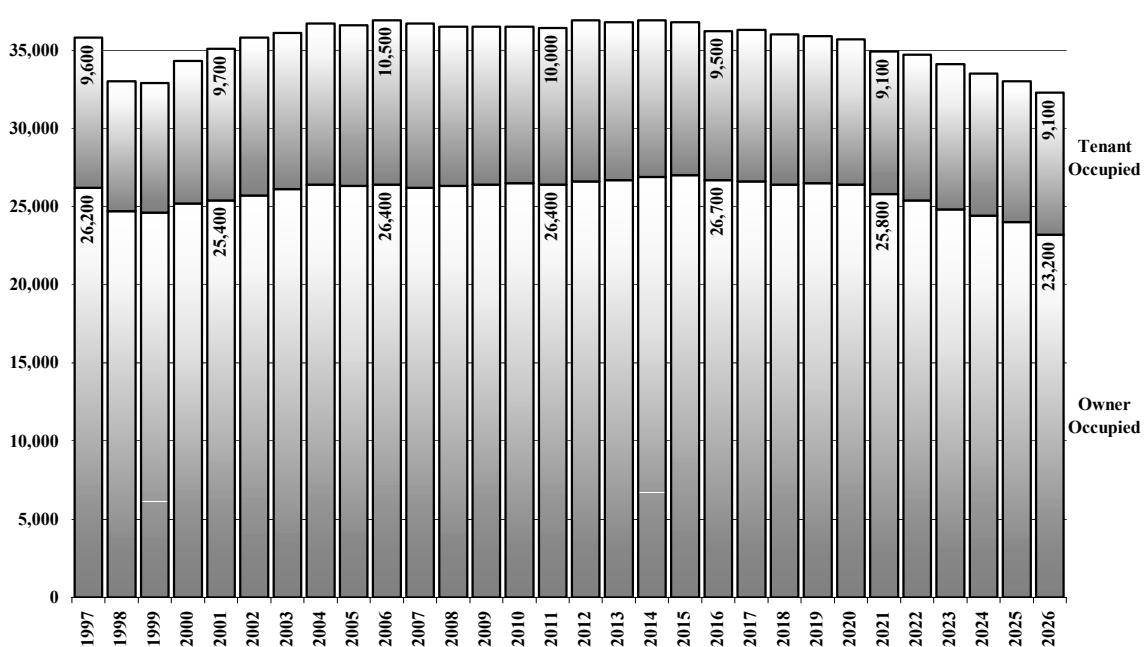
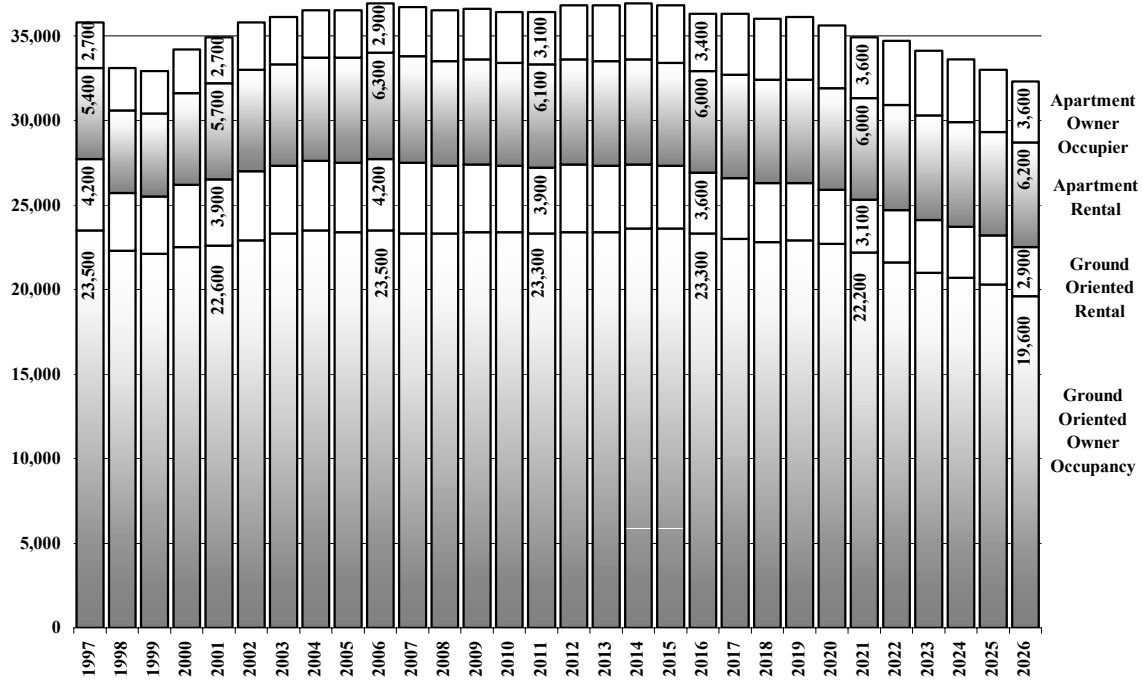


Figure 21: Additional Households, British Columbia, 1996 to 2026

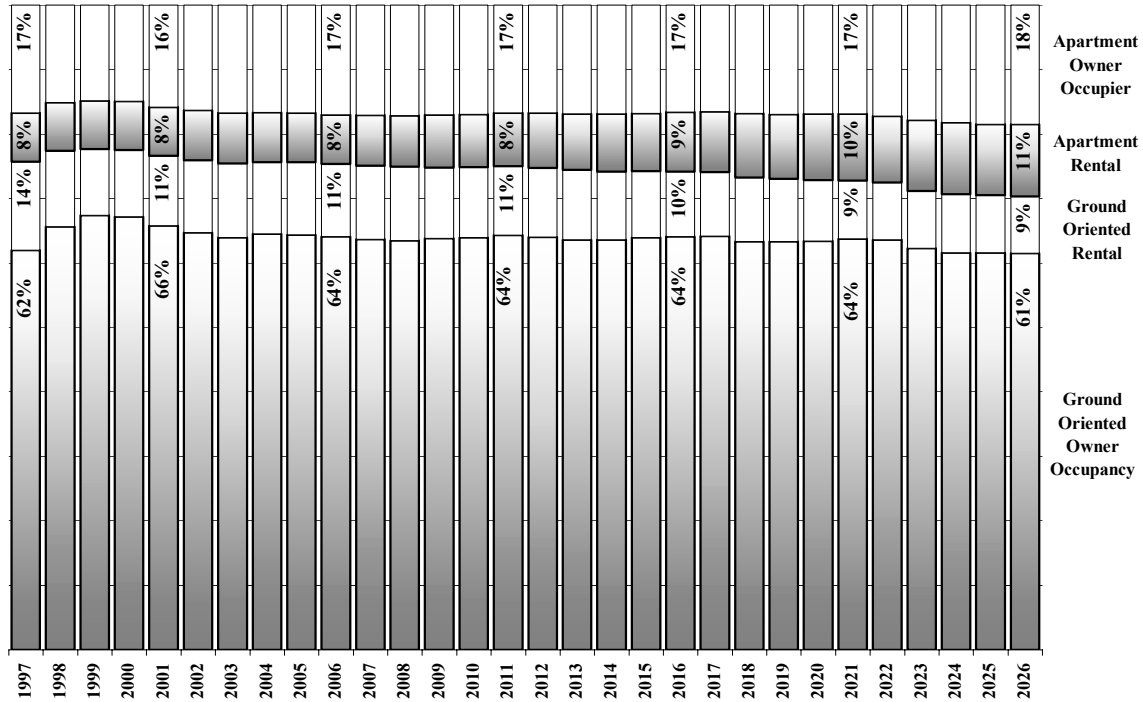


This apparent constancy of tenure shares conceals a shift from ground oriented to apartment owner occupancy and from ground oriented to apartment rental (Figures 21 and 22). In the first decade of the projection increases in demand will focus on the ground-oriented owner-occupier sector, with a net additional 23,100 owner-occupier ground-oriented units, 4,000 rented ground-oriented units, 5,700 rental apartments, and 2,700 additional owner-occupied apartments required each year. This will result in a mix of housing demand increases of 65% in ground oriented owner occupied, 11% in ground oriented rental, 8% in apartment owner occupied and 16% in apartment rental units.

By the last decade of the projection period, while the average net annual number of additional households would still be in the 32,000 range, the mix would have changed. Average annual increases in ground-oriented owner-occupied households would have declined to 21,700 additional households, the number of additional rental ground-oriented would have decreased to 3,200 per year, for rental apartments would have increased slightly to 6,100 additional units per year, and for owner-occupier apartments would have increase to an average of 3,700 additional units. This will result in a mix of housing demand increases of 62% ground oriented owner occupied, 9% in ground oriented rental, 18% in rental apartment and 11% for owner occupied apartment.

Thus, even with the assumption of constant 1996 age, tenure and structure type specific maintainer rates, demographic change will bring a shift in the composition of increases in housing demand. Apartment owner occupancy will see its share on net demand increases grow from 8% to 11%, rental apartments from 16% to 18%, while ground oriented owner occupancy will decrease from 65% to 62%, and rental ground oriented from 11% to 9%, of increases in demand

Figure 22: Percentage of Additional Households, British Columbia, 1996 to 2026



This growth projection assumes that household maintainer rates would remain constant at the 1996 level. In concluding this section, it is appropriate to consider some of the long run behavioral factors that may cause these maintainer rates to change. The first, and probably most significant, long run behavioural factor that will affect housing demand in British Columbia will be the increasing urbanization of the province's population. As urban areas and their surrounding suburbs continue to grow in population, contained as they are by green zones (both agricultural and forest land) and resource reserves, decreasing accessibility and increasing travel costs will, on the margin, push households towards higher density forms of housing.

Within the ground-oriented format, small lot single detached, duplex, and row housing will increasingly form an alternative to the traditional single detached house, particularly for households with affordability constraints (such as the young ground-oriented rental sector), two wage earner households, and empty nester households. As well, there will be a shift towards apartment households, as the increasing cost of travel, particularly the time costs, places a premium on higher density use of highly accessible sites. Thus, while the split between ground-oriented and apartment units projected here describes the relative magnitude of the growth in demand by structure type, there may be a marginal shift towards apartments from traditional ground-oriented units.

Accompanying this pattern will also be a shift, again on the margin, towards owner-occupier apartments. With increasing life expectancies, some people in the 55 and older population (particularly the 65 and older age groups) will have an increasing propensity to "cash in" on the equity build up in their homes, and yet will still seek the security of owner occupancy. This shift will be almost unnoticed in the ground-oriented market (given the size of this market), but will

have a significant effect on the condo apartment market. The condo apartment market will also benefit from increased investment demand as individual investors seek portfolio diversification through the ownership of condo units for rental, primarily to the youngest adult age groups (this portion of the market will be relatively sensitive to economic conditions and hence labour force migration) and the oldest age groups.

V. Conclusions

Over the long run, housing occupancy demand in British Columbia will increase faster than its population, the result of the aging of the province's current residents and of the migrants who come to join these residents in the future. While population growth of 57% over the 1996 to 2021 period will establish the basis for significant increases in housing demand, demographic change will compound these increases, with these two demographic factors leading to an 72% increase in housing demand.

From a demographic perspective, the level and composition of growth in demand will be relatively consistent throughout the next three decades, with average annual growth in occupancy demand between 32,000 and 36,000 net additional households formed each year. Of this total, approximately three quarters will be ground oriented units and one quarter apartments: approximately 80% of these units will be for owner-occupancy and 20% for the rental market.

The dominant household type will be the traditional ground oriented owner-occupancy household, compatible with a population where the majority of the residents, and the growth, are between the ages of 45 and 75. Each year, approximately 23,000 additional owner-occupiers will be added to the ground oriented housing market. The second most predominant form will be the traditional rental apartment, with approximately 5,700 more rental apartment households added to the housing stock each year.

Most significant in terms of growth will be owner-occupier apartment households, which will increase by 2,700 households per year in the near term, and 3,700 per year by the end of the projection period. Finally, the rental ground oriented market will show the slowest rate of increase, with approximately 3,700 household per year added to this sector of the market.

This projection rests on two assumptions. The first is that age specific maintainer rates will remain relatively constant at their 1996 levels. This is consistent with historical patterns over the past three decades. Any shifts between the two structure types are likely to be modest: where major changes can occur is within these major categories, as people, and land uses, shift towards higher density ground oriented and higher density apartment formats.

The second assumption was that it is appropriate to use the BC Statistics PEOPLE 23 population projection. This projection indicates a long term annual population growth rate in the range of 1% to 2%, well below the 2% to 4% range of annual growth that the province experienced in the past. Within the framework of this slowing of growth, the projection shows the aging of the population that will occur over the coming decades, a situation that leads to the specific pattern of housing demand projected here.

Population growth and demographic change will ensure that housing markets in BC will have a very strong long run future, with demand for all structure and tenure types increasing over the

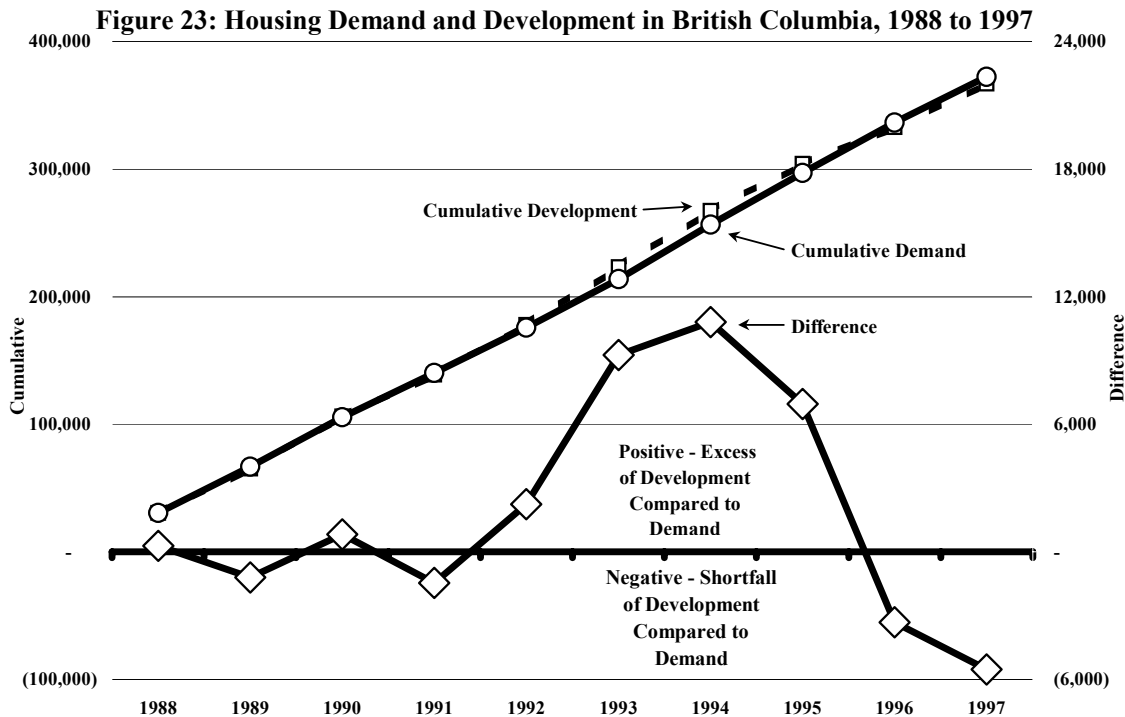
next three decades. What about the short run - what about right now? To answer that requires consideration of data that measures what is happening in the short run, specifically data that concerns additions to the housing stock, not in terms of households, but in terms of dwelling units.

It is necessary to consult two data sources for information on dwelling completions. The first is data on what is called the formal housing sector, that is, data on housing construction that is done with building permits, building inspectors and planning approval. Such development data, which comes from CMHC's starts and completions records, overstates housing demand slightly, as completed dwelling units are both meet net increases in occupancy demand and also to replace units demolished and conversion to other, non-housing uses. Having noted this, the overwhelming majority of new dwelling construction is to meet increases in occupancy demand. Since 1998, formal sector dwelling unit completions have varied from a high of 42,000 in 1993 to a low of 23,000 in 1987, with an average of 33,600 units constructed during the 1988 to 1997 decade.

The second data source concerns the informal housing development sector, that is data on housing construction that is done without building permits, building inspectors, or planning approval. This is overwhelmingly focused in the illegal suite (secondary suite, unauthorized accommodation or informal densification). It only costs \$10,000 in construction costs to add an illegal suite to the housing stock, while it costs at least \$65,000 in construction costs to build an apartment unit with permits, so illegal building activity has become the major source of affordable housing in BC.

As such informal development is done without official involvement, there is little in the way of official data on the extent of this market. The census does give some indication of the extent of this sector. In 1991, there were 36,120 rental "flats or apartments in detached duplexes" in British Columbia: in 1996, there were 51,420 such units, a 15,300 unit increase (3,060 units per year). While some of these units may have been developed with a permit and hence should be removed from the count, to some unmeasured extent, these would have to be replaced with other units that were not (due to their illegal nature) picked up in the census. Thus, 3,060 units per year added to the housing stock from the informal sector is a reasonable (and probably conservative) estimate of the extent of this market.

Figure 23 shows the cumulative number of formal sector building unit completions plus 3,060 illegal completions per year between 1988 and 1997: this cumulative development of 337,000 units is the estimated total number of dwelling units added to the housing stock in the province in the past decade. Figure 23 also shows the cumulative net households established in British Columbia during this period, as estimated using 1991 and 1996 age specific headship rates and BC Statistics population estimates: this cumulative occupancy demand of 372,000 is the total number of households added in the province over the decade.



The difference between these two indicates the relationship between building activity and demand. Over the long run: the difference should be modest (as building activity is driven by demand) and positive (as completions, while overwhelmingly determined by occupancy demand, also include a component of replacement demand for units demolished or converted to non-residential uses). In the short run, however, there may be a difference between development and demand.

For example, during the 1992 to 1994 apartment boom, development exceeded demand: in 1993, occupancy demand increased by 39,400 units while an estimated 45,100 dwelling units were added to the housing stock. As a result, an inventory of units built up, with cumulative overbuilding reaching a peak of 10,800 units in 1994. In response to this excess, building activity slowed, with the excess absorbed by mid-1996.

The current situation is quite different, with there currently being a shortfall of approximately 5,500 units developed than would be justified by estimated demand: to house the current estimated population of British Columbia at 1996 household formation rates would require building activity in the province since 1996 to have been 5,500 units higher than it has been.

As all households have to be accommodated, this discrepancy suggests that:

a) the true rate of informal sector additions to the housing since 1996 has been significantly higher than the 3,060 per year estimated for the 1991 to 1996 period using the census data. As the cost gap between development in the un-permitted and permitted sector continues to widen, it is logical to expect significant increases in the informal sector as a source of housing units. To the extent that this is happening, formal sector completions data will progressively underestimate

additions to the housing stock - perhaps Saturday sales of drywall should be used as a housing market indicator.

b) that population growth since 1996 has been lower than is indicated by BC Statistics Population Projection. While the population projection indicated relatively slow growth of the province's population in 1997 (78,000 additional people) and 1998 (65,000 more), compared to 1994's 103,000, 1995's 94,000, and 1996's 90,000, it may well be that the actual growth in 1997 and 1998 will be below the estimated values. To the extent that these already reduced estimates of growth are above what actually occurs, housing demand will be lower than that projected using the BC Stats projections.

c) that the current economic slowdown in British Columbia is pushing household maintainer rates down, with more people on average being accommodated in the average dwelling, as tenants double up, and young adults return to, or do not leave, the parental home. As was shown in the body of the report, maintainer rates fall in periods of poor economic conditions: BC is certainly in a period of poor economic conditions right now. This reduction of maintainer rates, as more people find that economics, rather than choice, determines who they live with, means that housing demand estimates based on 1996 rates will over-estimate the total number of units required in the short run.

Once British Columbia is able to effectively respond to the economic challenges and opportunities it faces, un-doubling of households and rising headship rates, a reduction in the relative role of the informal development sector and population growth will all lead to an expansion of development activity to first eliminate the current shortfall between cumulative demand and development, and then to expand the housing stock to accommodate the current resident's of the province as their housing requirements change as well as to accommodate new comers to the province. We can therefore anticipate housing development activity in the short run (the next two years) to be below the 33,000 units per year projected here, in the medium term (from 2000 to 2003) to be above the projected 35,000 units per year, and that the average from the next decade will be in the range of 36,000 per year.

Housing development and housing markets have a great long run future: the issue to create the short run conditions that will ensure that this future can be realized.

Notes:

¹ The 1991 and 1996 custom tabulations were acquired in co-operation with the Real Estate Foundation, as part of joint research projects undertaken by the Land Centre and the Urban Futures Institute.

² British Columbia Statistics, British Columbia Statistics PEOPLE 23 Population Projection, BC Statistics, 1998.

³ For further details on relative patterns of births and birth rates in Canada, see Babes in Lotus Land: Births, Birth Rates and their Market Implications in British Columbia, 1921 to 2021, The Urban Futures Institute, December, 1997.

⁴ 5 years age groups have been aggregated into broader categories in order to simplify the graph.

⁵ For a detailed discussion of increases in life expectancy, see What Can You Expect?: Life Expectancy in Canada, 1921 to 2021, The Urban Futures Institute, July 1998.

⁶ Historical data do not provide the same level of detail on age groups as the 1996 data.

⁷ See Homes in Metropolitan Vancouver's Future: Housing Demand by Structure Type, 1996 to 2021; The Urban Futures Institute, 1996, for further discussion of the relationship between metropolitan population growth, and changes in housing demand within rather than between major structure types.