

Demographics are Not Destiny

Written by Will Dunning

We keep hearing statements like “housing starts have exceeded demographics and it is time for a pause”. I’m not convinced that demographic analysis can tell us reliably what we should expect in the housing market. Don’t get me wrong – I spend a fair amount of time working with demographic models. I think we can learn a lot from this kind of analysis. But, we should not use demographics to forecast what might actually happen.

The core premise of a demographic model is that the size of the population (by age group) will dictate how much housing is needed, and therefore how much housing should be produced each year. There are several key inputs to these models:

- How large will the future population be, and how will that population be distributed across the age groups?
- For each age group, how much housing will be needed (what will be the future “household formation rates”)?

This article looks at these two sets of data, for British Columbia, and produces some estimates. Then, a look at housing starts finds that actual housing production almost never comes even close to matching the demographic requirements.

About population: as I discussed in the May report, the rate of population growth varies over time - growth moves in waves. Secondly, for British Columbia, the rate of growth has slowed. During 1976 to 1997, the growth rate averaged 2.1%. For 1997 to 2013, the growth rate averaged 0.9% per year. I argued in the May report that this slowdown has a lot to do with shortages of building lots and price growth, which has discouraged in-migration from other regions of Canada.

Using a demographic model (which includes analysis of migration as well as expected births and deaths) I project that the population of BC will grow by about 55,000 per year during 2011 to 2031, or 1.1% per year. The table below summarizes my projections of population

Table 1					
Projections of Population By Age Group for British Columbia					
Age Group	2011	2016	2021	2026	2031
0-14	683,297	710,198	765,747	820,473	855,002
15-24	585,423	598,950	573,067	582,022	627,316
25-34	615,930	661,499	713,980	739,216	720,655
35-44	617,063	618,646	674,512	723,084	778,587
45-54	705,110	681,045	646,294	653,862	711,488
55-64	605,598	657,294	688,638	670,120	638,063
65-74	371,985	474,596	562,708	617,614	648,886
75-79	126,783	145,214	180,899	238,989	262,914
80 +	164,451	186,113	213,911	261,417	341,720
Total	4,475,640	4,733,555	5,019,755	5,306,796	5,584,631
Growth	50,212	51,583	57,240	57,408	55,567
Per Year	1.16%	1.13%	1.18%	1.12%	1.03%
Source: Projections by Will Dunning Inc., using data from Statistics Canada					

In order to convert this population growth into housing demand, we need to apply “household formation rates”. We have data on actual household formation rates (from the Census). The question is – what will those rates be in future? Typically, analysts assume that the household formation rates will be the same as they were the last time they were measured. But, these rates do change over time. Chart 1 shows the household formation rates as measured in 2001, 2006, and 2011. For the youngest and oldest age groups, household formation rates fell by substantial amounts: for the 25 to 34 age group, the rate fell from 44.6% in 2001 to 41.8% in 2011. This might not seem very large, but in proportional terms it is a 6% reduction. Falling household formation rates means that housing demand in BC has been much lower than it might have been.

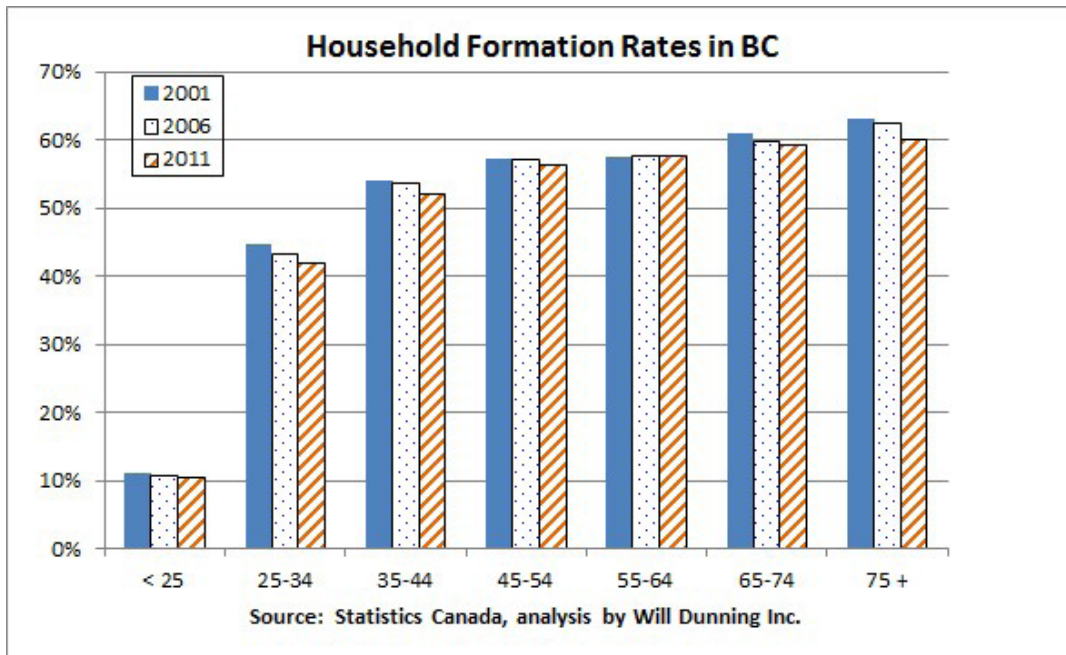


Figure 1

Disregarding this history, I have gone ahead and projected housing requirements for British Columbia, based on an assumption that household formation rates will remain at the 2011 levels. Combining the projections of population (by age group) and household formation rates (by age group), potential demand is estimated at 24,500 dwelling units per year during 2011 to 2016 and 27,400 units per year during 2016 to 2021.

Figure 2 looks at actual housing starts. The recent levels of starts (averaging 26,850 units per year during 2010 to 2013) have been quite close to the estimated requirement. But, for most of this history, actual housing starts have almost never been equal to the expected requirements.

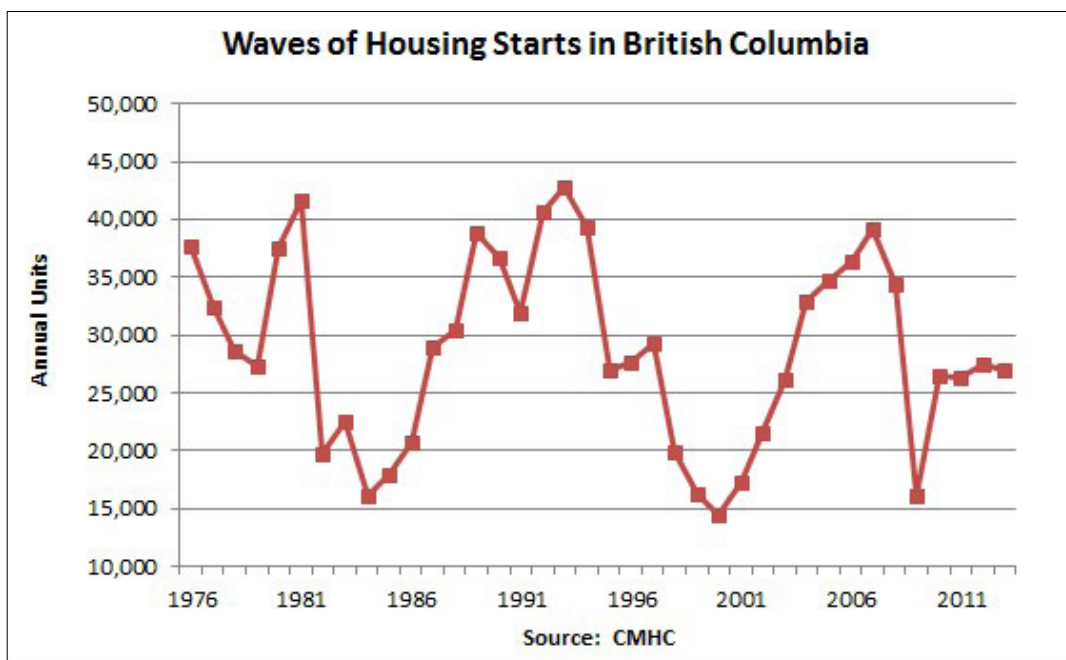


Figure 2

Variations in housing starts have a great deal to do with changes in economic conditions, especially job creation and housing affordability. Figure 3 (on the next page) contrasts housing starts with my favourite economic statistic: the employment-to-population ratio (or “employment rate”) is the percentage of adults who have jobs. When the employment rate is rising, it means that employment is growing more rapidly than the population, which is surely a good thing.

In this chart we can see a very close relationship between the employment rate and housing starts – most of the time, but not all of the time. There was a major exception during the late 1990s, when the employment rate fell slightly but housing starts fell fairly sharply. Another important factor came into play: house prices in BC rose very rapidly during the first half of the 1990s, in absolute terms and relative to the rest of Canada (in the late 1980s the average house price in BC was about the same as for all of Canada; by 1995, the BC average was 40% higher than for all of Canada). By the second half of the 1990s that was a big deterrent for in-migration to BC, resulting in a sharp slowdown of population growth and housing demand.

More recently, the BC employment rate expanded rapidly during the first half of the 2000s and housing starts followed. During the recession, the employment rate fell, and so did housing starts. Since then, the employment rate has been stable, and starts have been shockingly stable.

But, there is one big issue here: the level of housing starts looks low relative to the employment rate. I think that’s because housing prices in BC remain very high: the average resale house price in BC is still 40% higher than the average for all of Canada. This is reducing migration into BC and thereby impairing housing activity. If the BC versus Canada price gap was smaller, there would be more migration into BC and more housing starts.

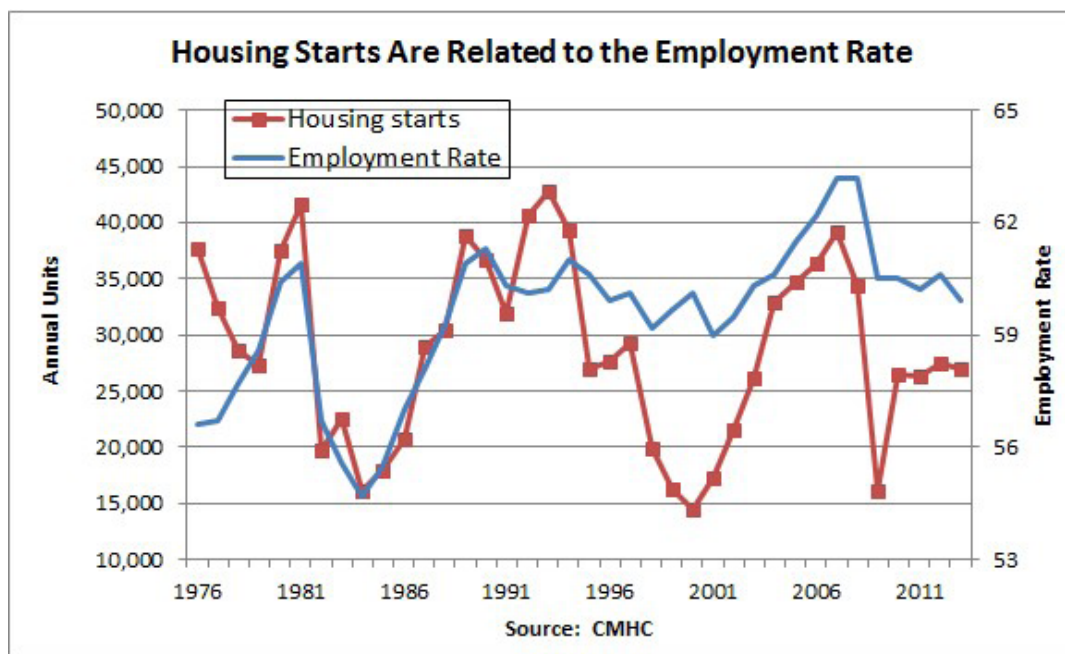


Figure 3

Here’s what I take away from this:

- Demographic analysis can tell us what might happen to housing starts – if we lived in a fairy-tale world in which the employment-to-population ratio was stable and housing affordability never changed.
- In the real world, housing starts are influenced by evolving economic conditions.
- Housing activity can depart – big time and for very long periods – from the levels suggested by the fairy-tale of demographic analysis.
- But, for the moment, BC is in that fairy-tale state: for now, the employment rate is flat (sort-of) and the ratio of house prices in BC versus all of Canada is also sort-of flat.
- These conditions will change, and housing markets in BC will continue to cycle.

Will Dunning operates a consulting firm that specializes in analysis of housing markets.