

Introduction to Session VI

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Although hedonics is not always a perfect or desired methodology for producing a quality-adjusted price series, it is nevertheless the only practical solution under certain conditions. Products for which quality-adjustments should be applied to price series are numerous and are growing in number as the outputs of the economy becomes more complex. One only has to look at computers and automobiles, where rapid technological change has meant that the conventional way of measuring “pure” price change (matched-model or -sample) is not the best option and when applied results in biased numbers.

Housing and real estate are another good example of a product for which, although the dynamics may be different from, for example, computers, the underlying problem is the same: from one period to the next, an identical version is impossible to find and therefore matched sampling cannot be applied. Given the relative importance of housing in household budgets and its importance in most people's wealth portfolios, the use of hedonics, which is more resource intensive than some other approaches, can easily be justified. Compared to its alternatives, my own research shows that long-term price trends and short-term cyclical behaviour of prices are best measured using hedonics. Another benefit of using hedonics for measuring real estate prices is that you could actually attack two birds with one stone, meaning that you could use the same hedonic function and data with only the slightest of tweaking in order to do spatial (or geographical) price comparisons, which have an analytical value with regard to real estate.

I would like to mention a few words about what is going on at Statistics Canada with regard to real estate prices. We at Statistics Canada are very interested in this conference and encouraged by the papers being presented, and thank the organisers for inviting us. At present, if I have to describe our current situation with regard to real estate prices, I would have to say that we are simply house-poor. For residential houses, we have the New House Price Index (NHPI) produced by Statistics Canada, which is a monthly series that measures changes over time of the contractor's selling prices of new residential houses, where detailed specifications pertaining to each house remain the same between two consecutive periods.

The survey also collects contractors' estimates of the current value of the land from which a land price index is obtained. The resulting series is used for calculating some of the components of the consumer price index for shelter, depreciation to be exact, and for deflating the value of the national housing stock in the national accounts.

My own hedonic studies, or I should say my own exploratory hedonic studies, using resale house prices drawn from Multiple Listing Services (MLS) data, which is available in Canada, seem to confirm that trends in the NHPI appear to track pretty well what is going on in the resale housing market.

Our general situation with regard to real estate prices is likely to change in the near future, however, and we might be expanding our series on house price indexes or our real estate price indexes for a number of reasons. The first reason being our reaction to the comments by the Governor of the Bank of Canada delivered at the Conference of European Statisticians about the need for better real estate price indexes. The second reason is the federal government's need for better house price indicators, which are used in our provincial equalisation payment program. And the third reason is because right now at Statistics Canada there seems to be a growing need for a more comprehensive inter-area or inter-city price comparison program, for which we do not have accurate measures of house prices that could be used for this purpose at the moment. In fact, it is Bohdan Schultz, our now retired index number guru, who said that a spatial price index without good shelter prices is like a meal without its main course.

I have said enough about our situation at Statistics Canada. Turning the discussion on hedonics, I thought I would probably provide some background information on hedonics by presenting some of the milestones in the development of hedonics. This can be helpful given that a lot was said yesterday about hedonics but I suspect not many people in the room are necessarily familiar with the subject.

A person named Haas conducted one of the first studies using hedonics in 1922, and the interesting fact – or tidbit – about this price index was that it was actually a real estate price index for an area around Minnesota.

Andrew Court in 1939, in one of the most cited works using hedonics, produced a hedonic price index for automobiles. It is in this study that the term “hedonics” applied in the context of a quality-adjusted price index using regression analysis was first coined.

Bailey, Muth, and Norris, in 1963, produced a regression method for real estate. In 1968, the US Bureau of Census started to produce a price index for single-family homes under construction, and it was certainly the first hedonic index produced within the context of a regular statistical program. It is still produced today. In 1991, the American Real Estate and Urban Economics Association devoted a whole number of their journal to real estate price indexes.

Hedonics has become quite popular. Yesterday on Google, if you typed in the search word “hedonic”, you would get 71,000 results. In 2000, according to Grimm and Landefeld, just about 17 percent of GDP final expenditures are deflated using hedonic price indexes. And today, we have two more papers to add to the growing collection of papers on hedonics.