

A Note On The Determinants Of Geographic Cost-Of-Living Differentials: The Case Of Canada

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I.

In a recent issue of *Land Economics*, Cebula (1980) investigates empirically the determinants of geographic living-cost differentials among SMSA's in the United States. For the year 1975, Cebula finds that greater population density, higher per capita incomes, and higher property tax levels all act to raise the cost of living whereas, greater population size and the existence of right-to-work laws both act to lower the cost of living.

The purpose of this brief note is to ascertain the determinants of geographic living-cost differentials in Canada. The analysis focuses upon living-cost differentials among Census Metropolitan Areas (CMA's) in Canada in the year 1976. The model estimated is an adaptation of Cebula's model (1980).

II.

The model to be estimated is given by:

$$C_i = a_0 + a_1D_i + a_2P_i + a_3Y_i + a_4T_i + a_5U_i + a_6 \quad (1)$$

where C_i = the average cost of living for a four-person family living on an intermediate budget, in CMA_i, 1976, expressed in current dollars (Canadian),

D_i = the population density in CMA_i, 1976, in terms of thousands of persons per square mile,

P_i = 1976 total population in CMA_i,

Y_i = 1975 per capita income in CMA_i,

T_i = 1974 per capita property tax level in CMA_i,

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U_i = percentage of CMA_i's civilian labor force
that was formally unionized, 1976,

a_0 = constant, and

a_6 = stochastic error term.

The data pertain to some 21 CMA's¹ in Canada and were obtained from the *Canada Year Book, 1978-79* and *Statistics Canada*. The model is structurally identical to Cebula's except that U_i replaces Cebula's right-to-work dummy variable.

The OLS estimate of (1) is given by:

$$C_i = 10,104.16 + 0.402ID_i - 0.0002P_i + 0.8072Y_i + \quad (2)$$

(+2.71) (-1.98) (+3.61)

$$2.9681T_i + 0.6048U_i, \text{ DF} = 15, R^2 = .59, F = 11.98$$

(+1.79) (+3.98)

with terms in parentheses being t-values.

III.

The results in (2) are qualitatively compatible with those obtained by Cebula (1980). In particular, it appears that greater population density, higher per capita income, higher property tax levels, and a greater degree of unionization all act to raise the cost of living in Canadian CMA's. On the other hand, greater population size tends to act to lower the cost of living in CMA's.

FOOTNOTES

¹The 21 CMA's for which geographically comparable living-cost data were available were Calgary, Edmonton, Halifax, Hamilton, Kitchener, London, Montreal, Ottawa-Hull, Quebec, Regina, St. Catharines-Niagara,

St. John's (Nfld.), Saint John (N.B.), Saskatoon, Sudbury, Thunder Bay, Toronto, Vancouver, Victoria, Windsor, and Winnipeg.

REFERENCE

- Cebula, Richard J., "Determinants of Geographic Living-Cost Differentials in the United States: An Empirical Note," *Land Economics*, (November, 1980).

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