

The macro determinants of health expenditure in the United States and Canada: assessing the impact of income, age distribution and time

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Abstract

This paper examines the determinants of real per capita health expenditures in order to assess the impact of age distribution, income and time using American state-level data for the period 1980–1998 and Canadian province-level data for the period 1975–2000. Ageing population distributions and income explain a relatively small portion of health expenditures when the impact of time effects, which is a partial proxy for technological change, is controlled for. However, the impact of age is of more concern given that cost increases are concentrated in the last few years of life and there may be cohort effects as the “Baby-Boom” generation ages. There is an urgent need to better understand the exact mechanisms driving health expenditure increases given that time accounts for approximately two-thirds of health expenditure increases and that its effect is non-linear. © 2004 Elsevier Ireland Ltd. All rights reserved.

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1. Introduction

The empirical literature on health expenditure determinants has dealt very little with the implications of more complex specifications regarding the effect of the population age distribution as well as technological change in driving health expenditure.¹ One study remarks that despite the claim of the importance of technological change to medicine, the “research mea-

suring the potential contributions of technology to rising health care costs has been scanty.”² Indeed, much of the health expenditure determinants literature has focused on income elasticity even though it has gradually become apparent that changes in income account for only a small proportion of the change in health spending.

This paper uses state-level data for the United States for the period 1980–1998 and province-level data for Canada for the period 1975–2000 to examine the determinants of health expenditures in order to assess the impact of income, age distribution of the population and time. The results suggest that an ageing population drives up health expenditures

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¹ In a recent article, [1] state that there is a need for “future researchers to invest more efforts on conceptualizing, measuring and incorporating the effects of broadly conceived technological progress in their econometric models of rising health care expenditure.”

² [1].