# Chapter 16 Health Expenditure: Short and Long-Term Relations in Latin America, 1995-2010

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## ABSTRACT

This chapter explores the factors associated with the growth of total health expenditure, in addition to its main components, government health expenditure and out-of-pocket payments. Results suggest that health expenditure in general does not grow faster than gross national product (GNP). No difference is found in health expenditure between tax-based and insurance-based health financing mechanisms. The authors confirm the existence of fungibility, where external aid for health reduces government health spending and out-of-pocket payments from domestic sources. The study also finds that government health expenditure and out-of-pocket payments follow the same paths in time, but are different for countries at different levels of economic development and the same for health expenditure growth. In Latin American countries, the relationship between health expenditure and GNP per capita is positive; there is a quick adjustment in the short run to obtain long-run behavior.

### INTRODUCTION

According to World health report, regarding the total expenditure on health, 10.1% of gross domestic product (GDP) was spent in 2012, 17.9% of GDP was out-of-pocket payments (OOP), and US\$1,027 per capita was spent on health. When people use health services, around 150 million each year suffer severe financial hardship as a result of paying health services. In a health spending projection, Sisko et al. (2009) calculated an average annual growth of 6.2%, 2.1 percentage points greater than the average annual growth in gross Domestic Product GDP, so health expenditure is a matter of great importance for each region and person.

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#### Health Expenditure

Across the world there are great variations in the amount countries spend on health. In high-income countries, per capita health expenditure is over US\$3,000 on average, while in resource poor countries it is only US\$30 per capita. Some countries spend more than 12% of GDP on health, while others spend less than 3%. Of total expenditure on health, 17.7% was out-of-pocket payments in year 2010. World Health Statistics (WHO, 2013) states that for year 2010, the per capita total expenditure on health for lower-middle-income countries was US\$152, for upper-middle-income countries it was US\$598 dollars, for low-income US\$ 63, and for high-income it was US\$4,612 dollars. The per capita government expenditure on health in 2010 was US\$24 for low-income countries, US\$55 for middle-income, US\$332 for upper-middle-income, and US\$2,850 for high-income.

## BACKGROUND

Since the seminal work by Newhouse (1977), much research has examined the relationship between health-care expenditure and GDP. Income per capita GDP has been identified as a very important factor for explaining differences across countries in the level and growth of total health care expenditure (Kleiman, 1974; Newhouse, 1977; Leu, 1986; Getzen, 2000). For Latin America, Govindaraj et al. (1997) estimated in 1990 that countries had an average per capita health expenditure of US\$162; on average, countries spent 6.2% of their GDP on health. Lustig (2000) presented a particular concern, that spending on primary education and health, and spending on programs that target the poor tend to be cut back along with other government expenditure. For the case of Chile and Colombia, Homedes and Ugalde (2005) confirmed the neoliberal reforms by the International Monetary Fund (IMF) and the World Bank; they are the overt actors that promote the reforms, according to Stiglitz (2002), as privatization and decentralization do not improve the quality of health care, equity, and efficiency.

Most of the research has been performed for developed countries, Schieber and Maeda (1999) calculated income elasticity at 1.13, and higher for public spending than for private spending. Musgrove et al. (2002) found that income elasticity of total health expenditure was between 1.133 and 1.275. Income elasticity for OOP ranged from 0.884 to 1.033, while it was between 1.069 and 1.194 for government health expenditure. Hall and Jones (2004) argued that health care is a superior good because as individuals get richer, they choose to spend a larger proportion of their income on health care, while van der Gaag and Stimac (2008) stated that income elasticity for total health expenditure was 1.09 and found that income elasticity was less than one in the Middle East and greater than one in Organisation for Economic Co-operation and Development (OECD) countries. Murthy and Okunade (2009) found that income elasticity was between 1.089 and 1.121.

Most recently, Yerdelena (2011) showed that an increase in health expenditure causes an increase in economic growth for all countries in the short and long run. Koivusilta et al. (2013) found a strong mutual interaction between school achievement and adoption of health-compromising (HCB) and health-enhancing (HEB) behaviors in early and late adolescence. Both hypotheses acknowledged the crucial role of family background. The pathway from health behaviors in adolescence to adult education runs through a person's school career. One of the mechanisms leading to health inequalities in adulthood Koivusilta et al found was the interplay between behaviors and educational pathways in adolescence. Jalal and Khan (2014) noted that there is improvement in life expectancy with increasing gross national income (GNI) per capita and GDP because where there are fewer resources, people are much less healthy

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