

## Chapter 9

# Health Infrastructure and Economic Growth in Sub-Saharan Africa

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### ABSTRACT

*In this study, we examine the effect of health infrastructure on economic growth in 30 Sub-Saharan Africa (SSA) countries over the period 1990-2014. Using modern econometric techniques that account for cross-sectional dependence in panel data, we find that health infrastructure (measured by mortality rate) does not have robust impact on economic growth. Gross fixed capital formation, however, is positively associated with economic growth while labor force and polity variables exhibit significant association with economic growth. The results provide sufficient evidence that although capital investment is adequate, the labor force and political environment have not facilitated the health infrastructure in increasing the GDP per capita level in SSA.*

### INTRODUCTION

For more than three decades, many Sub-Saharan African economies have experienced stunted life expectancy as a result of rampant communicable and parasitical diseases (The Economist Intelligence Unit, 2012). These low life expectancies have further been worsened by the inability of several communities in Africa to provide portable drinking water, good sanitation and inadequate nutrition. Coupled with these problems are the lack of adequate financing for the improvement and expansion of health care infrastructure in the region. According to the International Finance Corporation (IFC) (2007), although

DOI: 10.4018/978-1-5225-3168-5.ch009

Sub-Saharan Africa (SSA) constitutes 11% of the world population, it accounts for 24% of the global disease burden. Further, the report notes that the region commands less than 1% of the global health expenditure creating a huge finance deficit in healthcare infrastructure and delivery. The result is that the region has not been able to achieve the Millennium Development Goals (MDGs) and the Abuja declaration.

Infant mortality rate per 1000 live births in 1960 was very high (160) in SSA compared to Latin America and East Asia which recorded 103 and 133 respectively. Adult mortality rates per 1000 persons (male) that same year for SSA (547) was higher than Latin America (304) and a bit lower than East Africa (650). Total life expectancy at birth, in the 60's for SSA was 41 years while East Asia and Latin America stood at 39 years and 56 years respectively. By 2015, infant mortality rate per 1000 live births in SSA stood at 56.3 while Latin America and East Asia reduced drastically to 15.9 and 14.9 respectively. Concerning adult mortality rates per 1000, SSA documented 333 in 2013 while East Asia and Latin America documented 135 and 181 respectively. Turning to total life expectancy at birth, SSA improved to about 58 years in 2013 whereas Latin America and East Asia improved to 74 and 73 years respectively<sup>1</sup>. Similarly, health expenditure, hospital beds and physician density have been relatively low in the region compared to other regions (see Appendix 1); Liberia had physician density (i.e. physicians per 1000 population) of 0.01 and South Africa had 0.78 in South Africa while advanced economies such as Switzerland and United Kingdom had 4.05 and 2.81 correspondingly. These deteriorating health indicators amidst the region's quest for improved economic conditions makes this study interesting case for empirical examination. Consequently, the World Bank's Global Economic Prospects (2015) report note that economic growth has been fairly constant in the region. The question then is whether the declining health indicators are linked to economic growth. Equally important is the effects of declining health indicators in SSA relative to global indicators on economic growth.

It is worth mentioning that amidst these poor conditions, however, some African countries have made remarkable strides; For example, Ghana, Rwanda and South Africa have established a health coverage system which promises universal health coverage. Nonetheless, life expectancy continues to increase steadily each year in OECD countries. Life expectancy at birth averaged 80.5 years in 2013, an increase of over ten years since 1970 (OECD, 2016). According to the OECD (2016) report OECD nations such as Japan, Spain and Switzerland have life expectancy above 80 years. This is not surprising because there are more than two specialist doctors for every generalist on average across the OECD. Likewise, student enrolment into domestic nursing and medical schools have increased substantially over the past two decades.

Generally, a good health infrastructure is crucial to economic development. Theoretically, a good health infrastructure is known to increase human capital levels as well as economic productivity of individuals in a country. Additionally, a good health infrastructure helps improve education levels by increasing the levels of schooling and scholastic performance. This affects economic growth by raising income levels and also decreasing poverty levels, *ceteris paribus*. This study measures health infrastructure with the number of infant deaths and the number of deaths under-five. The underlining logic behind the use of these measures is that good health infrastructure equates to low number of infant deaths in the region whereas high number of infant death denote a poor health infrastructure.

Many studies have examined health and economic growth but usually pertaining to developed economies. On the whole it is found that health is positively related to economic growth. For instance, Bloom, Canning, and Sevilla (2004) find that good health has a positive effect on aggregate output after controlling workforce experience. Gong, Li and Wang (2012) conclude that economic growth is related

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