

Research Article

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“An analysis of the connections between health, demography, and economic development in developing countries”.

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Abstract

Keywords

Demographic changes, Economic stability, Healthcare infrastructure, Investments

The relationship between healthcare, population dynamics, and expansion of economy is both intricate and pivotal for the development of underdeveloped economies. Increase in Population can drive economic progress by stimulating demand and innovation, yet uncontrolled expansion may strain resources and infrastructure, impeding progress. Healthcare plays a crucial role in fostering economic stability by enhancing human capital, increasing workforce productivity, and reducing economic disparities. This study explores the interdependencies between healthcare investment, demographic changes, and economic development, drawing insights from global and regional analyses. It examines how healthcare expenditure contributes to better health outcomes, thereby fostering economic growth. To sustain economic growth and improve the standard of living, India must prioritize investments in healthcare infrastructure, enhance service delivery, and address socio-cultural barriers. Strengthening healthcare policies, reducing disease burdens, and expanding rural healthcare facilities are essential steps toward ensuring equitable access to medical care. By tackling these issues, India can optimize its demographic dividend and drive sustainable economic progress. The study also identifies difficulties such as inadequate healthcare infrastructure, demographic shifts, and socio-economic inequalities that hinder progress in underdeveloped regions. Findings suggest that improvements in healthcare systems lead to healthier populations, higher labour productivity, and sustained economic growth. The paper underscores the necessity of strategic policies, international cooperation, and targeted investments in healthcare to drive sustainable economic development.

Introduction

There is a close and complex relationship between healthcare systems, population and development among many other aspects. By raising the demand for products and services, population increase can, on the one hand, promote economic development by encouraging investment and innovation. However, unregulated rise in population can severely strain infrastructure and resources, hence impeding progress. Because of this, this relationship can be both beneficial and difficult, depending on how it is handled. The intent of development is human dignity and well-being, an essential ingredient of which is health. Population health is a measure of sustainable social development progress, and "health for all" needs to be one of the tenets of sustainable development as a whole. The goal of international development initiatives in underdeveloped nations following World War II was to lower mortality. The fear of uncontrollably increasing populations at the close end of the 1960s brought cooperation for development and health back into the forefront of public discourse. Ensuring that population policies are implemented as part of a broader effort to improve people's health and reorienting population policies from a demographic to a quality-of-life imperative are the challenges of the 1994 International Conference on Population and Development, which will be held in Cairo.

According to the Alma-Ata International Conference on Primary Health Care in 1978, primary health care is the key to everyone's health. The foundation of primary health care is technology and practices that are socially acceptable, scientifically sound, and practical. The idea suggests that everyone in the community, including families, should have continuous, cheap, and full access to health care. Primary care is provided as close to people's homes and places of employment as feasible, at the initial point of contact between them and the national health system. A vital component of the nation's health system, it is the first step in an ongoing healthcare process. The health-for-all approach demands coordinated activities in all the sectors and the dedication of political, economic,

and social decision-makers to provide the required coordinated efforts to mobilize public support and involvement. A 2001 study underlined that, in the long term, having a healthy population may be more significant for human capital than schooling. Using the extended Solow growth model, the investigators observed that 23 OECD health stocks have an impact on the growth rate of per capita income in 23 Organization for Economic Cooperation and Development (OECD) nations for the 1975–1994 period and 21 African countries for the 1961–1995 period.

The engines of development are mainly the human and human energy, so, sick, exhausted individuals cannot produce in the economy. Economic development requires a population that is healthy and active in order to find more time and energy to use its natural and human resources for environmentally friendly employment and care.

Objectives:

1. To analyse the connection between healthcare, population and economic Progress of a underdeveloped economies
2. To examine how healthcare expenditure supports the better health opportunities and contributing economic growth.

Healthcare in underdeveloped countries faces challenges like poor infrastructure, limited access, and high disease burdens. Quick population expansion and migration to urban areas, and ageing populations impact demographic trends. Economic development is hindered by income disparities, sectoral imbalances, and dependence on foreign aid. The link between health and economic growth is crucial, with better health improving productivity. Effective policies and global cooperation are essential for sustainable progress. Some of the important reviews based on the topic is given below.

On January 16, 2025, **Ariane Ephemias Ndzigat Mouteyica and Nicholas Ngepah** conducted a multilevel linear mixed-effect analysis to investigate health outcome discrepancies in African regional economic groups. While an older population and better access to water can mitigate health inequities, the report emphasizes that increased unemployment and HIV rates exacerbate them. Health outcomes in African Regional Economic Communities are greatly influenced by economic factors such as government health spending and trade advantages.

Mahdi Almutairi, Ali Al-Otaibi, Layali Almahdi Eatish Alruwili, and seven others Journal of Ecohumanism, December 12, 2024 Examining Global Health Trends, Economic Effects, and Cultural Adjustments in Healthcare Critically The study examines the connections among healthcare, economic development, and demography, emphasizing the ways in which economic and demographic shifts impact healthcare systems. In order to overcome gaps and improve healthcare delivery across various locations, it highlights the necessity of strategic international alliances.

Wen Qin, Fangfang Hu, Afei Qin, and seven more March 5, 2022 Does the unequal allocation of healthcare resources stem from unequal economic development? China-based evidence from 2001 to 2020 The study emphasizes how the spatial allocation of healthcare resources is greatly impacted by economic growth, with regional differences clearly visible. In order to advance fair access to healthcare and enhance general health outcomes, it highlights the necessity of addressing health disparities, especially in areas of poverty.

The Petra Szűcs, December 13, 2024 Economic Issues and Demographic Changes in the European Union The study emphasizes how demographic changes, especially an aging population, put a burden on social security and healthcare systems and have an effect on economic growth. To overcome these obstacles and use senior employees' productivity to boost the economy,

regional differences call for customized approaches.

R. Sharma, Sumandeep Kaur, and Ravi Kiran, they conducted research on Healthcare Spending, Health Outcomes, and Economic Growth: A Study of BRICS Countries on September 14, 2024. According to the study, population growth has a positive correlation with GDP and GDP per capita in the BRICS nations, whereas healthcare spending has a favorable impact on both. Complex interdependencies are highlighted by the lack of substantial connections between newborn mortality and life expectancy.

The study conducted by **Andreea Nerişanu and Horia Iuga** (17 October 2024) examines the consequences of economic conditions and the quality of the healthcare system on the population of older adults from a health economics perspective. According to the study, there are notable favourable relationships between financial success and medical resources and the size of the older adult population. This implies that when high unemployment and inflation have a negative impact on healthcare access and resources, GDP, healthcare spending, and hospital bed availability all contribute to demographic aging.

Public health has a positive impact on economic growth in South Asia, while fertility and mortality rates have an adverse effect on GDP, according to a paper by **Maria Iftikar and Hina Ali** (7 June 2024) titled Public Health Impacts on Economic Growth in Developing Countries: An Analytical Review of Research. This association highlights the significance of demographic dynamics in economic contexts and implies that enhancing healthcare facilities can boost economic development.

Methodology

This study makes use of secondary data from World Health Organization (WHO), the World Bank, and the Organization for Economic Cooperation and Development (OECD) to compare healthcare spending, economic

indicators, and health outcomes. National Health Mission (NHM) and Economic Surveys of India provide insights into healthcare infrastructure, expenditure patterns, and policy effectiveness. A review of existing literature on healthcare spending, demographic transitions, and economic growth informs the theoretical framework, etc.

Details of the study:

The connections between healthcare, population and economic progress of a underdeveloped economies.

A nation cannot be economically stable if its residents are not healthy and productive. Reducing health disparities is something that we physicians should keep working toward, and addressing the social determinants of health is essential to creating a solid economic foundation. Development, population dynamics, and healthcare have a complicated and nuanced interaction. While demographic shifts and levels of development have an impact on healthcare access and efficacy, improvements in healthcare also lead to healthier populations, economic growth, and overall development results. When it comes to building human capital, healthcare is crucial. Having access to excellent medical services, such as education and preventive care, strengthens people's capacity to make meaningful contributions to social and economic advancement.

There is a correlation between development metrics like income levels, education levels, and infrastructure and access to healthcare. Although there may be differences both within and between countries, there is typically a correlation between higher levels of development and improved access to medical treatment. Better healthcare is associated with economic growth. Economic growth results from the higher productivity of healthy populations. Better health outcomes and economic prosperity are two benefits of investing in healthcare infrastructure, such as hospitals and clinics. Similar to other emerging nations, India's economic progress is significantly influenced by its healthcare system. Economic output,

creativity, and productivity all depend on a healthy workforce. During the past 20 years, Overall, India's economy has done surprisingly well, in light of economic development, all of this is made possible by the government-provided healthcare facilities.

Building a productive workforce for the nation is facilitated by having a population that is in good health. Even the age group this isn't productive needs to be healthy in order to accomplish lessen the burden of healthcare in the country. Children who are healthy have a higher chance of grow up to be healthy adults who are able to make a greater contribution to the economy. Through the enhancement of health, healthcare facilities immediately participate in the rise in both the supply of labor and the productivity of the workforce. Furthermore, when seen as economic sectors, health systems are a significant source of employment and provide commodities and services that directly contribute to the expansion of the economy. A robust healthcare system is necessary to alleviate the burden on families and promote national growth.

An excellent healthcare system guarantees a robust economy, according to OCED Observer. Indeed, their findings showed even a little 10% rise in life expectancy guarantees an annual economic growth of about 0.4%. Developing nations are beginning to recognize the impact that life expectancy and healthcare play in economic success. With a constant investment in healthcare infrastructure and a big pool of highly qualified medical experts at their disposal, some of them have even grown competitive. In many of these nations, the cost of therapy has greatly decreased throughout the past few years. India is home to a large and vibrant youth culture, with a large proportion of the population being under the age of 35. Because a young, working-age population can spur innovation, consumerism, and labour supply, this demographic dividend has the potential to accelerate economic growth. However, It is imperative that the whole country ensures that young people are employed, educated, and healthy in order to fulfil their potential.

Healthcare expenditure supports the better health opportunities and contributing economic growth.

According to certain research, health gains can raise GDP and vice versa. One important aspect of human capital quality is healthcare. The productivity of human capital rises as a result of higher healthcare spending, supporting economic expansion. Nonetheless, there is continuous discussion over the types of healthcare expenditures and the ideal spending levels that support economic growth.

The effects of health indicators for both rich and developing nations between 1965 and 1990, economic performance in emerging nations rose dramatically in tandem with improvements in public health. According to studies, a one-year rise in life expectancy boosts economic growth by 4% annually. Economic performance can be influenced by healthcare spending since it can lead to improved health opportunities, which can boost productivity and human capital. Therefore,

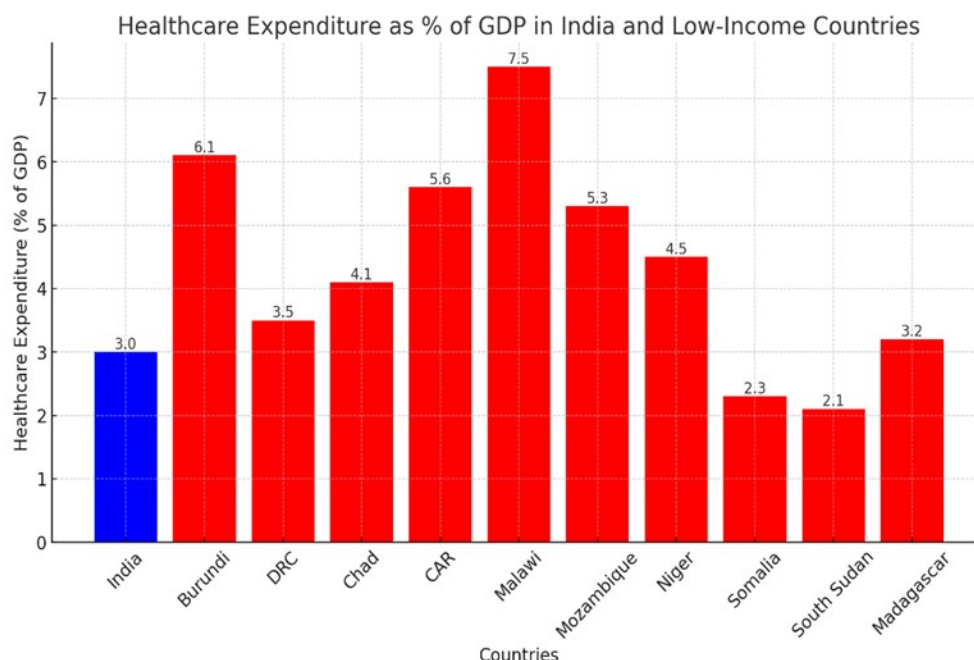
evaluating a nation's healthcare spending phenomenon is crucial. We gathered health and economic data from the Bureau of Labor Statistics and the Bureau of Economic Analysis for the years 2003–2014 using visual analytics. Overall, the findings point to a robust healthy correlation between healthcare spending and labour productivity, GDP, and income.

While, making thoughtful investments in a range of healthcare-related areas would reduce poverty and increase GDP, productivity, and income. Given these possible advantages, more research should be done on universal healthcare access. The factor of worker productivity is a significant dimension in the relationship between health spending and economic performance. While capital is abundant as a factor of production and labour is scarce in developed countries, this is not the case in emerging nations where labour is the foundation of economic growth; in these countries, an increase in poor health among individuals is likely to result in a loss of labour workforce and productivity.

Comparison of Healthcare Expenditure

Countries	Health Expenditure (% of GDP)	Per Capita Expenditure (USD, 2021)
India	~3%	~\$73
Barundi	6.10%	~\$20
Congo (DRC)	3.50%	~\$21
Chad	4.10%	~\$27
Central African Republic	5.60%	~\$25
Malawi	7.50%	~\$30
Mozambique	5.30%	~\$32
Niger	4.50%	~\$35
Somalia	2.30%	~\$18
South Sudan	2.10%	~\$15
Madagascar	3.20%	~\$22

Source:The Global Health Expenditure Database(2024)



It is clear from the above table and diagram that, India spends more in absolute terms but less in relation to GDP than some low-income countries and Out-of-pocket expenditure is high in many underdeveloped countries due to weak public healthcare systems. Healthcare infrastructure is weak in low-income countries, with fewer hospitals, doctors, and medical equipment. Malawi, Burundi, and the Central African Republic allocate a higher percentage of their GDP to healthcare, but their absolute spending remains low due to smaller economies.

India has improved accessibility to medical treatment, though Rural communities continue to face challenges due to accessibility. Health's influence on savings is a key component of the relationship between healthcare spending and economic development. A person's life expectancy can be extended by being in good health, which also motivates them to save more money for retirement and to spend more in their business, both of which are positive economic outcomes.

Conclusion


India's health service can be enhanced with an emphasis on improving awareness of healthcare

and entitlements to it, better service delivery, better monitoring of patients, and paying attention to socio-cultural aspects. Further investment is also required in India's healthcare infrastructure, which includes rural health centers, clinics, and hospitals. Access to necessary services is guaranteed for both urban and rural populations by a strong healthcare infrastructure. Malnutrition, infectious diseases, and non-communicable diseases (NCDs) are still major problems in India, placing a heavy burden on the country's healthcare system and financial resources. Resolving these problems is essential to promoting economic growth.

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