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Analysis Of Public Healthcare Expenditure And Its Economic Impact

Neelam Singh
Associate Professor, Economics Department, VMLG PG College
Ghaziabad

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ABSTRACT

A social security system that is well-developed enhances the health conditions of its residents, encourages the market involvement of an efficient labour force, and is a driving force behind the quick advancement of both economic and social growth. In addition to assisting in the prevention of excessive inflation in social consumption, appropriate public expenditures on healthcare may also contribute to the maintenance of economic and social stability. Study is qualitative and focuses on literature from the very last list to the current one to get an comprehensive idea about political economics of public health expenditures by analysing the consequences of the shifting pattern of government health expenditures in India. The purpose of this research is to get an understanding of the political economics of public health expenditures by analysing the consequences of the shifting pattern of government health expenditures in India over the course of the last two and a half decades.

Key words: *Public expenditure; government policies; economic growth; development*.

INTRODUCTION

It is an investment in a nation's health capital as well as a social welfare expenditure that enhances people's lives and wellbeing. Public health expenditures are also known as social welfare expenditures. According to the findings of earlier studies, the rate of return on capital and macro investments in countries that are members of the Organisation for Economic Co-operation and Development (OECD) from 2005 to 2020 exhibited a fluctuating decreasing trend. A social security system that is well-developed enhances the health conditions of its residents, encourages the market involvement of an efficient labour force, and is a driving force behind the quick advancement of both economic and social growth. In addition to assisting in the prevention of excessive inflation in social consumption, appropriate public expenditures on healthcare may also contribute to the maintenance of economic and social stability. As a result, nations that are members of the Organisation for Economic Cooperation and progress (OECD) depend on investments in healthcare and other social welfare services to enhance the health and work efficiency of their inhabitants, guarantee the continuous economic input of an efficient labour market, and foster economic progress. The link between the expenditures made by the public health system and the expansion of the economy has emerged as a significant area of academic interest in the domains of public health and social security. It is vital to have a profound understanding of the link between public health expenditure and economic growth, as well as the trends and heterogeneity of this relationship, in light of the fact that public health expenditures have been increasing all over the globe.

According to historical records, the provision of health care has been a primary issue in achieving the goal of providing "all welfare for all" across all age groups. It is a well-known fact that effective and readily accessible public health facilities not only improve health and demographic indices, but also reduce the price that every household must spend for health care. In a country like India, where 26.9 percent (372.83 million) of the population lives below the poverty line (PLFS [Panagaria et al., 2023]), the availability of basic services like health care is determined by how much money the government spends. The Indian government has built a decentralised and diverse framework to ensure the growth of basic health services and their availability to all citizens. These facilities range from first aid clinics to super speciality hospitals, and the bulk of them are open to the general public. A number of demographic trends, such as an

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increase in the need for modern healthcare facilities, an increase in illness awareness, an increase in health consciousness among people, an increase in per capita income, a change in lifestyle, an infection in the disease profile, and so on, have all contributed significantly to the development.

The healthcare business in India is one of the country's most significant economic sectors, both in terms of employment creation and revenue generation. On the other side, there is a substantial disparity between the number of health care offered and the amount needed. India's public health services are still unable to expand enough to satisfy the needs of a growing population or reach the country's interior. Furthermore, India's inadequate healthcare system has long struggled to meet the needs of a large and diverse population. Despite the fact that the nation's healthcare business is rapidly expanding, the country's medical staff shortage remains a reality and a problem. According to non-governmental groups working in the health sector, it is currently impossible to accomplish the health sector's objectives within the time frame stated under the current conditions. These aims include lowering neonatal death rates and completely eliminating tuberculosis by 2025. According to a 2014 World Health Organisation survey, 67.78 percent of all health-care expenditure in the country comes from people's pockets. Globally, the average proportion of people who pay for their own health care is 18.2 percent. According to the World Health Statistics 2023 study, between 2013 and 2021, 26.1 percent of India's population, or around 37.271 crore people, had to spend more than 10% of their personal income on medical treatment.

According to the national health account report (2019-20), 5.1 crore Indians (3.9 percent of the entire population) spend more than a quarter of their household budget on treatment. Non-government organisations claim that the vast amount of money spent on healthcare leads an average of four crore Indian families to slip into poverty. Under these conditions, it is critical to thoroughly examine not just the quantitative but also the qualitative distributional elements of public health care and infrastructure expenditures. Furthermore, via policy improvements, the structure of public health should be maintained in a way that aligns with the stated aims. The goal of this study is to give factual findings and suggestions by studying various patterns of public health expenditure, as well as the use of the knowledge gleaned from this analysis.

As a result of the emergence of the capability approach to measuring human development as the end goal of all our development policies and programmes, which has replaced the previous growth-centered measure of development, the social sector, which includes health, education, and poverty eradication, has become the focal point of development policies. Among these, the provision of basic health care is particularly important since it serves as both the means and the end goal of our efforts to contribute to development. It is difficult to achieve the goal of adequate human growth when the majority of people suffer on a number of levels due to a lack of access to even the most basic medical care. As a result, providing basic medical care is critical to reaching our ultimate aim of ensuring people's well-being in a sustainable and long-term way.

As a consequence, the Indian government has committed to investing at least three percent of its GDP to public health development. Despite this, the goal has yet to be met, which means that a large number of poor people are obliged to spend money they do not have. The federal and state governments' total health-care expenditures account for around one percent of GDP (Raghupathi V, Raghupathi W, 2020). When such a little amount is compared to significant health indicators such as infant mortality rate, maternal mortality rate, life expectancy at birth, sex ratio, and degree of malnutrition, the concerning disparity in our health care becomes plainly obvious. Even such small investment has been decreased as a consequence of new economic policy changes implemented during the 1990s. Not only has public health spending been recognised for its role in combating major diseases such as HIV/AIDS, tuberculosis, and malaria, as well as meeting Millennium Development Goal (MDG) targets and contributing to poverty reduction, but it has also been recognised as important for a country's industrial and economic development (CMH, 2001; NCMH, 2005; UN, 2008). There is a view that public health expenditures are one of the critical components that contribute to the supply of health facilities, resulting in better health outcomes. However, India's performance in terms of improving health outcomes has always been inadequate. It seems that India is not making progress towards meeting the bulk of the Millennium Development Goals (MDGs). For example, certain health outcomes, such as infant, child, and maternal death rates, are not only low, but also much higher than those in several impoverished countries. According to the World Health Report (2023), India's infant mortality rate (IMR) is about 26, but Sri Lanka's IMR is less than 10 (6.4). When compared to the average life expectancy at birth in industrialised countries, which is around 64 years, India's average life expectancy is at least 15 years lower. It is even lower than Sri Lanka's average life expectancy of 74 years. Malnutrition affects over half of all children in India, and in certain locations, the situation is worse than in Sub-Saharan Africa. According to the World Health Report (2010), anaemia affects more than half of women. Inequalities in health outcomes between rural and urban regions persist and have become broader.

Objective of the study:

The purpose of this research is to get an understanding of the political economics of public health expenditures by analysing the consequences of the shifting pattern of government health expenditures in India over the course of the last two and a half decades.

METHODOLOGY:

Study is qualitative and focuses on literature from the very last list to the current one to get an comprehensive idea about political economics of public health expenditures by analysing the consequences of the shifting pattern of government health expenditures in India

LITERATURE REVIEW:

Zahra Mila Elmi (2012) examined the relationship between economic growth and health care expenditures in developing nations, focussing on causation and co-integration links. They identified a causal relationship between health care expenditure and GDP, as well as between health spending and economic growth. Fiscal expansion and healthcare expenditures exhibit a long-term correlation and bidirectional causality. Research indicates that the long-term income of emerging nations is a significant factor contributing to the economic increase in health care spending. The report advocated for government engagement through the establishment of effective health systems and regulations, alongside appropriate healthcare expenditure.

Mohammad Javad Razmi et al. (2012) employed the ordinary least squares method to examine the impact of government health expenditure on the human development index. The findings indicate a positive correlation between public health expenditure and the human development index. The Granger causality test was utilised in the study to demonstrate that health spending and human development do not exhibit a bilateral relationship. Health spending, when regarded as a public benefit, was assessed for its impact on human development using the ordinary least squares approach. It was found to have a significant and positive impact on human growth. According to their suggestion, funding for public health improvement and its associated challenges should primarily come from non-governmental organisations. Public health finance is a complex field requiring public health agencies to maintain accountability and transparency in the interpretation and communication of financial data.

In 2012, K.K. conducted a study. Bhadra and J. Bhadra examined the factors contributing to the inadequate state-level health budgets in India. The report indicates that health care expenditure by the federal government and individual states remains below 1 percent of GDP. Limited financial resources are available for health care following the investigation into the states' adherence to their committed obligations. The responsibilities and accomplishments of the finance commission in achieving nationwide parity were also addressed.

T. In 2012, a paper was authored by Subba Lakshmi, Prasant Kumar Panda, and Himanshu Sekhar Rout. Government health expenditure can be classified into two main categories: income and capital. Revenue expenditure includes routine costs such as wages, medical and prescription expenses, public health programs, health education and training, and operational expenses. Capital expenditure denotes the allocation of funds for singular expenses, particularly for the procurement of tangible assets and infrastructure. The government allocated a total of 1,104,543 million rupees for healthcare, encompassing both federal and state expenditures. This constitutes approximately 3.68 percent of total government expenditure, equating to 30,037,588 million rupees.

Nardi and Gyurko (2013) examined the relationship between General Government Expenditure and Economic Growth in India for the period 1980-81 to 2015-16. Their conclusion indicated that all explanatory factors positively and significantly influenced the GDP growth rate, with the exception of the FDI growth rate. Edame and Akpan (2013) examined the structure and growth of federal government expenditure in Nigeria. The researchers concluded that the rise in government spending in Nigeria can be linked to the fiscal deficit, gross domestic product, government revenue, and federal debt servicing.

The private sector constitutes a significant share of health expenditure in India (Shailender Kumar Honda, 2013). India's public expenditure on health is comparatively lower than that of other countries. This study examines India's healthcare expenditure over the past 25 years (1987–88 to 2011–2012). India exhibits the lowest level of public expenditure on healthcare globally. This research indicates that both federal and state governments must enhance efforts to guarantee citizens access to high-quality, affordable public amenities.

Jagannath Mallick (2013) noted the evolution of the Indian economy characterised by a mixed-federal structure. In 2003, Parliament enacted the Fiscal Responsibility and Budget Management Act (FRBM), aimed at stabilising the fiscal situation and reducing the deficit. Mallick analysed new data on the combined revenue and capital expenditures of the federal and state governments across fifteen large states from 1993–1994 to 2004–2005, illustrating the impacts

of public expenditure. The research indicates that state income in the revenue account is positively influenced by public spending, contributing to balanced income growth throughout the state.

In his 2013 book 'The Great Exodus: Health, Wealth and the Origins of Inequality,' Nobel laureate Angus Deaton analyses the cholera epidemic of the nineteenth century and the influenza pandemic of the twentieth century. The majority of European nations regard infectious diseases such as cholera and influenza as threats to their economic growth. These nations began investing in the development of their public health systems.

Tae Kuen (2013) conducted research on the relationship between public health expenditure in industrialised nations and their overall health outcomes. The two public health indicators utilised were the infant mortality rate and life expectancy at birth. The investigation utilised a mixed-effects model and cross-national panel data. Contrary to expectations, the study found a positive correlation between public health spending and life expectancy at birth, as well as a negative correlation with the infant mortality rate. The findings indicated that increased public investment in health infrastructure correlated with enhanced health outcomes. Finally, they suggested that a successful health sector strategy would involve decreasing infant mortality rates and enhancing life expectancy.

Arun (2013) conducted a study on health spending in India over the past few decades. The expectation was that the states would spearhead improvements in India's healthcare system. The study supports private funding for an efficient healthcare system in rural India. Healthcare expenditure has influenced systemic vulnerabilities, particularly regarding private investment. Their advocacy focused on the enhancement of healthcare facilities and the provision of affordable health insurance plans by the government. Funding for public health has increased at both federal and state levels in response to these issues. The Rashtriya Swasthya Bima Yojana (RSBY) health insurance programme has provided significant benefits to numerous low-income individuals. Government expenditure on healthcare institutions has increased, as the report indicates, effectively enhancing healthcare for the most disadvantaged populations while concurrently partnering with the commercial sector.

Mohammad Asif et al. (2013) examined inclusive growth, public healthcare spending, and GDP. Research indicates a correlation between public spending on health and wealth. Extensive research demonstrates a strong correlation between GDP and health expenditure. Co-integration analysis was employed to assess the long-term correlation between total health spending and NDP.

Lekha S. Chakraborty (2013) investigated the efficacy of public expenditure on healthcare, an empirically ambiguous issue. The findings indicate that only a limited number of states possess more egalitarian public health systems. The public provision of healthcare services served as a clear indicator of polarisation. Francesco Grigoli (2013) conducted research on the efficiency of public health spending in developing nations. It was found that public spending is considerably low, indicating a substantial need to improve health outcomes. Government investment in healthcare may have limited effects on health outcomes due to the inefficiency associated with such investments. The study assessed the socioeconomic determinants of health during the period using a stochastic frontier model. Despite higher life expectancy in African nations, public health expenditure is less efficient compared to other regions. Moreover, both emerging and developed countries have allocated resources to enhance their healthcare systems. Improved health outcomes can enable a more effective allocation of public health funds.

Farag et al. (2013) found that effective governance improves the efficiency of healthcare spending. Despite numerous initiatives, significant disparities in access to public healthcare among states persist (Chatterjee et al., 2013). India's healthcare expenditure is significantly lower compared to other densely populated developing countries and affluent nations. He referenced the Bhore Committee Report published in 1946, which indicated that the expenditure on public health per capita was one-seventh of that on private health services. India has made advancements in various health metrics; however, it continues to lag in outcome measures. The morbidity and mortality rates in India are excessively high, which is considered unacceptable.

Agbonkhese and Asekome (2014) examined the impact of public expenditure on Nigeria's economic growth. This research's empirical findings indicate that public expenditures over the years have not effectively achieved the intended economic development and quality of life improvements.

Fatima Boussalem et al. (2014) conducted research on public health expenditure and its relationship with GDP growth. The notion that health and income are empirically related has been proposed. The relationship between government health care expenditure and GDP per capita must also be assessed using Granger causality. Long-term feasibility of public expenditure is influenced significantly by income, as they found. The study's findings indicate that for improved health outcomes, the nation should incorporate characteristics such as strong governance and democracy.

Muftaudeen (2014) performed an empirical analysis to assess the long-term effects of government expenditure on health outcomes in Nigeria. The study examined the impact of government expenditure on the healthcare sector and

the resulting outcomes. The coefficients for both the short-term and long-term health sectors were calculated utilising the vector error correction model. Findings demonstrate a positive correlation between the newborn death rate and the under-five mortality rate over an extended period. The causality test results provide substantial evidence to reject the null hypothesis concerning baby and child mortality rates. To enhance health outcomes through government intervention, substantial funding is deemed necessary. Emerging nations require increased funding to enhance their health and educational systems.

Yaqub et al. (2014) assert that inadequate budget management is a primary factor contributing to ineffective health expenditure in Nigeria. Numerous studies have demonstrated a correlation between public health budgets and their corresponding outcomes. The report identifies corruption as a primary obstacle to economic development in the health industry. Ordinary least squares methods were employed to assess the reverse causation between the nation's health status and public health expenditure. This research indicates a negative correlation between infant mortality rate and per capita GDP.

Akinci et al. (2014) demonstrated that the allocation of funds by both the government and private sector towards healthcare significantly reduced the rates of infant, under-five, and maternal mortality in the Middle Eastern and North African regions.

Duggal (2014) evaluated the policy established in 2002, which aimed to achieve an adequate level of health for the Indian population through a national health strategy. The policy emphasised decentralisation, equality, accessibility, and the provision of affordable private healthcare. The main objective of the health sector during the eleventh five-year plan (2007-2012) was to foster equitable growth. Established in 2005, the National Rural Health Mission aims to deliver healthcare services in rural areas. The Twelfth Five-Year Plan (2012-2017) sought to attain universal health coverage through the implementation of an essential health package and the assessment of societal factors affecting health. The 2017 national health policy, following a 14-year interval, reaffirmed these objectives and sought to guarantee healthcare access for all individuals. In 2018, the Indian government launched the Ayushman Bharat Yojana, the largest health insurance program globally. This program ensures health coverage of ₹500,000 for the treatment of severe illnesses for all impoverished households.

Goyal and Sharma (2015) conducted a study on the composition, cyclicality, and multipliers of government expenditure in India. The research indicates that capital investment has a significantly greater long-term positive impact on production than revenue expenditure. Furthermore, it exerts a reduced immediate impact on inflation and mitigates inflation volatility by addressing structural bottlenecks.

The study by Hooda (2015) examines the factors influencing public expenditure on health in India. The author argued that the state's priority variable was pertinent only for EAG states, excluding other states. Political engagement influences health expenditure in India.

Barenberg, Basu, and Soylu (2015) examined the relationship between public health expenditure and infant mortality rates across 31 Indian states and union territories. Public health spending may contribute to a reduction in infant mortality rates in India, as indicated by a simultaneous equation model.

Andrew J. Barenberg et al. (2015) investigated the impact of government spending on healthcare on newborn mortality utilising state-level panel data in India. Factors such as urbanisation, female literacy, and per capita income have been considered. Research indicates that public spending on health care has led to a reduction in infant mortality rates, urbanisation, and improvements in female literacy. The study examined the potential for a bidirectional causal relationship between health expenditure and the infant mortality rate. They employed instrumental variables to investigate simultaneous causality empirically. The results indicate that the share of state GDP is inversely correlated with public healthcare expenditure.

The NITI Aayog conducted research on government healthcare spending during the eleventh five-year plan, as detailed in their 2015 report. According to the report, personal costs account for 70 percent of health care spending. The World Health Organisation states that low-income countries should allocate sixty dollars for healthcare expenditures. Furthermore, aligned with WHO standards, India's per capita health expenditure was sixty-one dollars. An increase in spending in 2014–15 suggests that the Ministry of Health and Family Welfare (2015–16) intends to allocate additional resources to the health sector.

Shailender K Hooda (2015) conducted research on the variance in public spending on the health sector across states. He examined socioeconomic factors to elucidate health costs. Budgetary capability has served as a significant indicator of advancements in health policy. Expenditure on health has significantly increased due to the National Rural Health Mission, which has greatly influenced rural India.

Bikash Kumar Malick (2015) examined the relationship between government healthcare expenditure and long-term productivity. He made a commendable effort to analyse the correlation between health metrics and GDP per capita. He found a significant correlation between health spending and GDP growth. The study indicates that health expenditure has been effectively incorporated into national health policy, contributing to long-term economic development. Extending an economy's production ensures a fundamental standard of living regarding health and education. Education has contributed to improved health through increased educational attainment and academic achievement. Furthermore, he found that health problems have negatively impacted economic growth and overall factor productivity. Healthcare spending also contributed to the increase in the infant death rate. Increased spending on health leads to a longer life expectancy and a more efficient, competent workforce. Research indicates that individuals may sustain their prior income levels while reducing work hours when health outcomes are enhanced. Serdar Kurt (2015) examined the impact of health expenditures on economic development, considering both direct and indirect effects. This research empirically examined the correlation between public health spending and GDP growth. The research indicated that total expenditure increases in response to rising health care costs. Multiple studies indicate a correlation between health care expenditures and GDP growth. Government spending on healthcare, overall demand, and output are experiencing an increase. Conversely, it was demonstrated that health expenditures were adversely impacted by illnesses and accidents. He stated that health care may require additional funding from the business sector. Investments and expenditures positively influence both the health sector and aggregate demand. Research on public health spending indicates that the majority of studies have offered theoretical justification for their findings. Most research has concentrated on healthcare expenditure independently. The analyses examine the relationship between health and health infrastructure indices. Various factors, such as data, time periods, and econometric methods, have resulted in positive outcomes for these metrics. Public expenditure on health is a highly debated subject within academic discourse. The concept of complementarity has both supporters and opponents.

Lyngdoh's (2015) evaluation of the healthcare infrastructure index for northeastern Indian states from 2001 to 2011 identified Assam and Meghalaya as the least successful, whereas Tripura and Mizoram were deemed the most successful.
Houeninvo (2015) examined the relationship between public health expenditures and health outcomes. The study utilised panel data encompassing 43 African nations from 1996 to 2012 to examine health outcomes. She employed a cross-sectional, fixed-effects, and Generalised Method of Moments model to assess the impact of public investment on health outcomes and per capita health expenditure. Two primary factors influence the effectiveness of public health expenditure. Healthcare expenditure and the efficacy of its administration are the primary indicators of actual resource availability and quality. Secondly, she has recognised that these broader governance measures possess limitations in conceptualising thresholds and non-linear relationships.

Chatterjee and Laha (2016) demonstrate a clear correlation between the level of government funding and the quality of public healthcare services in Indian states.

The robust health services and the well-being of the population have significantly contributed to Europe's rapid economic growth and enhanced life expectancy in recent decades. The 2016 study titled "No Respite for Public Health" was published in the Economic and Political Weekly by Sundaraman, Indranil Mukhopadhyay, VR Muralitharan, and the Public Health Foundation of India. The institute had an affiliation with the Indian Institute of Technology, Madras. The article states that nations must learn from West Africa's Ebola crisis that neglecting investment in public health systems leads to vulnerability to deadly epidemics. The potential to enhance a nation's health security and economy is significant. This outbreak poses a significant risk to industry growth and expansion. Vora (2016) published a paper examining the public revenue and expenditure of the Indian government. This study identified a significant increase in revenue receipts, capital receipts, revenue expenditures, capital expenditures, planned expenditures, and unplanned expenditures throughout the research period.

Maswadeh (2016) examined the structure of public revenues and expenditures and their effects on the deficit of the Jordanian public budget. The analysis indicated that the effect of tax income on the Jordanian public budget deficit surpasses that of non-tax revenues, whereas the impact of current expenditures on the public budget deficit exceeds that of capital expenditures.

Mohanty, A.R., & Mishra, B.R. A study conducted in 2017 examined the co-integration between government expenditure and revenue in India. The results of this study's Vector Error Correction Models demonstrate a unidirectional causal relationship from tax income to spending, applicable in both the short-term and long-term contexts.

S. Santhanalakshmi and S. Malathi state (2017) The allocation of funds for public health in India has recently generated global discourse. Numerous studies indicate the limited financial resources allocated to health care in India. The health sector obtains funding from various sources, including federal, state, and municipal governments, in

addition to non-governmental organisations (NGOs). This paper analyses government expenditure on health in India from 2001 to 2015, focussing on its composition, trends, and growth rate.

The health sector's public spending in India was analysed by Mohammed Ashfaq (2017). Estimates indicate a progressive growth in revenue and capital accounts. The findings indicate an increase in the proportion of public funds allocated to health care. The Indian government has established a target of 2–3 percent of GDP for enhancing health expenditure. The government must implement measures to enhance capital investment in the health sector and augment overall allocations for this sector.

Richardson Kojo Edeme et al. (2017) conducted a study examining the impact of public health expenditure on population health outcomes. The study's long-term analysis revealed a correlation between public health spending and positive health outcomes. Research indicates that increased public health spending enhances life expectancy and reduces newborn mortality rates, thereby contributing to greater overall life expectancy. Urban populations and HIV significantly influence health outcomes. Public health expenditure is identified as a crucial determinant in improving national health outcomes. The report advocates for a more strategic allocation of resources to the health sector to enhance health outcomes and economic standing.

Das and Guha (2017) reported comparable findings, indicating that densely populated states in northeast India receive a limited share of income and capital expenditure for healthcare. The Indian government has consistently prioritised healthcare improvement, evidenced by the submission of the first comprehensive health strategy and plan, the Bhore Committee Report, in 1946. The growing disparity in health outcomes between rural and urban areas, as evidenced by various health indices, was recognised in India's fifth five-year plan (1974-1978). The Minimum Needs Programme subsequently prioritised the enhancement of healthcare service availability in rural areas. The sixth five-year plan (1980-1985) emphasised the global goal of attaining 'Health for All by the Year 2000 A.D.', yet minimal progress was observed in the realisation of this aim (Grover & Singh, 2020). The first national health policy was established in 1983 to pursue comprehensive healthcare for all individuals. In the seventh five-year plan, specialised centres were established to offer treatment for specific diseases such as AIDS, cancer, and coronary heart disease. The eighth five-year plan (1992-1997) aimed to enhance the health of disadvantaged populations through a focused healthcare strategy. The ninth five-year plan (1997-2002) included the Bhore Committee Report and other significant recommendations. The initiative implemented strategies tailored to specific states, integrated medical education with health services, established primary healthcare centres in slum areas, coordinated programs both horizontally and vertically, and improved disease surveillance systems.

The Government of India (2017) reports that the country is currently facing a triple burden of diseases, comprising communicable diseases, noncommunicable diseases, and emerging infectious diseases. In this context, the present research seeks to evaluate the impact of financial factors on the development of Health Information Management (HIM) across various states in India over time.

A review of the literature indicates that various health indices influence public spending on health. Health infrastructure indicators encompass the quantity of hospitals, physicians, nurses, dispensaries, and primary health centres, alongside metrics such as birth and death rates, infant and child mortality rates, neonatal mortality rates, and life expectancy at birth. Many of these metrics result from public health expenditure, with most being correlated to it. This analysis demonstrates that health indicators are the principal determinants of government expenditure on healthcare. This study aims to analyse the impact of public spending on health in Tamil Nadu utilising current data and appropriate research methodologies.

A study by Rana et al. (2018) found a direct correlation between healthcare spending and health sector performance in 30 OECD countries.

Boachie et al. (2018) showed that public health investment in Ghana positively influenced health outcomes, employing both ordinary and two-stage least square estimators.

Sinha (2018) argued that the Rashtriya Swasthya Bima Yojana, a health insurance program initiated by the government in 2008 for low-income individuals, did not reduce the likelihood of incurring severe financial burdens from healthcare costs, nor did it increase hospitalisation rates among the impoverished population.

An analysis of catastrophic health expenditure was conducted by Anamika Pandey, George B. Ploubidis, Lynda Clarke, and Lalit Dandona (2018). The research encompassed the period from 1999 to 2014. During the utilisation surveys, the percentage increased threefold in the lowest income quintile and one and a half times in the highest income quintile. Households composed solely of individuals aged 60 and above exhibited a higher likelihood of experiencing catastrophic spending compared to homes without elderly members or children under five years of age. Households led by women, situated in rural regions, and comprising both young children and elderly individuals

exhibited a higher likelihood of being at risk. Public health spending significantly influences the performance of health indicators within a population, as indicated by the literature review. Public health facility expenditure in India is misaligned, a widely recognised fact. This work represents a distinctive analytical contribution to the field, facilitating new avenues of inquiry.

Research by Nilachala Acharya (2019) indicates that public health expenditures have increased, while private companies are benefiting from this trend. The insurance model guarantees coverage of public expenditures, irrespective of the level of involvement from a private partner. The exclusion of a significant portion of the population from the privatised system constitutes a critical issue at present. Individuals in remote regions may possess health insurance; however, access to treatment during a pandemic is hindered by the absence of nearby healthcare professionals. The insufficient availability of public health facilities, coupled with the concentration of private health professionals in urban centres, results in inadequate access to necessary care for individuals with insurance residing in remote tribal communities. The proportion of catastrophic health expenditure rose 1.47 times from the 1993-1994 expenditure survey to the 2011-2012 expenditure survey (18.2 percent), and increased 2.24 times from the 1995-1996 utilisation survey to the 2014 utilisation survey (24.9 percent).

Kausik Stenberg et al. (2019) examined public health spending and its effects across various Indian states. Their analysis of secondary data from 67 middle- and low-income countries revealed that these nations need to double their current healthcare expenditure to ensure the provision of basic universal primary healthcare services.

Nyamuranga and Shin (2019) utilised panel data from developing nations and the 16 countries within the Southern African Development Community to illustrate that public health expenditure significantly affects the reduction of infant and under-five mortality rates in these regions. The research indicated that the most significant effect occurred within the Southern African Development Community from 2000 to 2013.

The 2019 report by the Comptroller and Auditor General of India (CAG) indicates that public health expenditure in India is confined to a range of 1.02–1.28 percent of GDP. The health needs report indicates that by 2025, the Ministry of Health must elevate public health expenditure in India to 2.5 percent of GDP. The CAG report indicates that in 2018–19, the allocation for the National Health Mission was 13.6 percent below the budget forecasts. The National Health Profile-2018 reports that in 2015, India's public health expenditure constituted 1 percent of GDP, ranking as the second-lowest in the South-East Asia region. In that year, the Maldives allocated 9.4 percent, Sri Lanka 1.6 percent, Bhutan 2.5 percent, and Thailand 2.9 percent. According to the NITI Aayog's three-year Action Agenda (2017–2020), the National Health Fund (NHF) was projected to receive an additional 14.5 billion rupees by 2019–20. Data analysis indicates a decrease in healthcare funding: in 2017–18, India allocated Rs 53,294 crore ($7.7 billion); in 2018–19, Rs 56,045 crore ($8.1 billion); and in 2019–2020, the budget was set at Rs 65,038 crore ($9.4 billion). India's National Health Policy 2017 stipulates that, in alignment with the SDGs, state health expenditures must exceed 8 percent of their annual budget by 2020. Between 2012 and 2017, seven states reported health spending as a percentage of their total budget, ranging from 3.29 to 5.32 percent.

The results indicate that factors including population, per capita income, and the number of hospitals positively influence government health expenditure, as discussed in Subhalaxmi Mohapatra's (2019) article, "How Government Spending Affects People's Well-Being." This research presents the effects of the income and capital components of public health spending. This study analyses state-level data from India to investigate the correlation between public health expenditure and various outcomes, including child and neonatal mortality rates, total fertility rates, tuberculosis incidence, and the proportion of underweight infants at birth. This research aims to analyse the effects of various components of health spending from a national perspective. This research examines six health outcomes, including fertility, morbidity, nutritional status, and various components of the health system, to assess the impact of public health spending revenue and capital on these variables. This body of work provides an overview of research on health outcomes.

Analysts Mampi Bose and Nilachala Acharya from the Centre for Budget Governance and Accountability identified significant underfunding of public health in the 2019 federal budget. The chapter on health states, "Despite the evident necessity to invest in the enhancement of the public health system, the direction of health policy in India is unethically shifting towards an insurance-based model of healthcare, thereby reinforcing the private healthcare sector." The study indicated that the total health budget increased by approximately 8500 crores in 2019–20 relative to 2018–19 (base year), representing a 74 percent rise, suggesting a transition from public health to an insurance-based model. The funding for Ayushman India accounts for the proportion of the health insurance scheme. The National Health Mission (NHM) is tasked with this policy shift, aiming to enhance the public health system through the National Rural Health Mission (NHRM) and the National Urban Health Mission (NUHM).

Numerous studies have investigated the impact of governance on health outcomes. Kaijun et al. (2020) proposed a positive correlation among medical system governance, population composition, health, and healthcare resources in China, aiming to understand the influence of medical system governance on public health. Yaqub et al. (2012) found comparable results in their evaluation of the effectiveness of public health expenditure in Nigeria. Kumar and Singh (2020) identified notable disparities in healthcare infrastructure across districts in Punjab, with fifty percent of the districts experiencing a deterioration in their healthcare facilities.

Furthermore, access to healthcare facilities is restricted, with a deficiency in personnel, essential medications, and equipment. There is also inadequate infrastructure, transportation, and communication, alongside ongoing adherence to traditional practices and superstitions (Mohamed Saalim, 2020). Primary healthcare centres function as referral units for six subcentres in India. Subcenters are small facilities comprising four to six beds, staffed by one medical officer and 14 paramedical personnel. They offer healthcare services specifically aimed at rural regions. Behera and Dash (2020) indicate that aggregate health spending, especially public health expenditure, has improved life expectancy at birth and reduced infant mortality rates in Southeast Asia. The relationship between health expenditure and healthcare objectives was determined to be weak.

Mohanty, Ranjan Kumar, and Deepak Kumar Behera (2020) examine the impact of public health expenditure on various stages and health outcomes from 2005 to 2016, utilising panel fixed effects models across all states in India. This research indicates that per capita health care spending positively influences life expectancy and vaccination rates, while negatively impacting newborn mortality, child mortality, and malaria cases. This study provides significant policy implications for policymakers and researchers aiming to enhance public health objectives, including the increase of health expenditure. Empirical findings indicate the study's significance in achieving Sustainable Development Goals and Millennium Development Goals, along with advancements in universal health coverage at the state level in India. The report recommends enhancing public health to rapidly improve the health of Indian states.

Deepti Ahuja and Deepak Pandit (2020) have examined the relationship between government spending and GDP growth through theoretical reasoning and empirical analysis. The study utilised a comprehensive data set encompassing 59 countries from 1990 to 2019 to examine the relationship between public expenditure and GDP growth. Additionally, the role of government spending on infrastructure in promoting economic development can be analysed through a Keynesian framework. The findings indicate that governmental expenditure, investment, and trade accessibility serve as control factors positively influencing economic development. Investment has been found to have a positive impact on economic growth when other factors are controlled for.

Mohanty and Behera (2020) found that per capita expenditure on public health negatively affected newborn and child mortality rates, as well as the incidence of malaria cases in India from 2005 to 2016. Nonetheless, it positively influenced life expectancy at birth and the extent of immunisation coverage.

Kiross et al. (2020) found a significant negative correlation between public and external healthcare expenditure and the rates of newborn and neonatal deaths in sub-Saharan Africa.

Cardona et al. (2021) reported findings suggesting that elevated county-level spending on social programs and infrastructure could improve life expectancy at birth.

Previous research has demonstrated a strong correlation between income and health outcomes, indicating that per capita income significantly influences health. Al-Azri et al. (2021) identify a significant positive correlation between per capita gross domestic product and life expectancy at birth, alongside a decrease in newborn mortality rates in Arabic regions.

Sarabia et al. (2021) found a negative correlation between rising annual healthcare expenditures and the incidence of COVID-19 across 28 European Union countries.

Data from India's Sample Registration System (2022) indicates that the infant mortality rate in the country declined from 57 deaths per 1000 live births in 2006 to 34 in 2016. According to a calculation by the World Bank, India's maternal death rate in 2015 was 174 per 100,000 live births, exceeding the Millennium Development Goals target of 109.

In their study, Banik et al. (2022) analysed data from 161 countries spanning from 2005 to 2019. They discovered that simply increasing support for healthcare does not lead to improvements in human development. Instead, they found that political stability and the absence of terrorism have the most significant positive impact on health expenditure. This, in turn, contributes to an enhanced quality of life.

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Balani et al. (2023) contended that more expenditure and larger budgetary allocations specifically for healthcare do not necessarily lead to improved health outcomes in Indian states, since these elements are influenced by the unique political economy of each state. Agreeing with this idea, using a panel.

DISCUSSION:

Public Healthcare Expenditure in India: A Comparative Analysis

• India's healthcare expenditure is significantly lower than other developing countries and affluent nations, with a Bhore Committee Report indicating that public health expenditure per capita is one-seventh of private health services.
• Despite progress in health metrics, India continues to have high morbidity and mortality rates.
• Public expenditures have not effectively achieved the intended economic development and quality of life improvements.
• Public health expenditure and GDP growth are empirically related, with the relationship between government health care expenditure and GDP per capita influenced significantly by income.
• A positive correlation exists between the newborn death rate and the under-five mortality rate over an extended period, suggesting substantial funding is necessary for improved health outcomes.
• Inadequate budget management is a primary factor contributing to ineffective health expenditure in Nigeria.
• The allocation of funds by both the government and private sector towards healthcare significantly reduces the rates of infant, under-five, and maternal mortality in the Middle Eastern and North African regions.
• The Indian government's national health strategy aims to achieve an adequate level of health for the Indian population through decentralisation, equality, accessibility, and affordable private healthcare.
• Capital investment has a greater long-term positive impact on production than revenue expenditure and mitigates inflation volatility by addressing structural bottlenecks.
• Factors influencing public expenditure on health in India include political engagement, infant mortality rates, urbanisation, female literacy, and per capita income.
• The share of state GDP is inversely correlated with public healthcare expenditure.
• The NITI Aayog reports that personal costs account for 70 percent of health care spending, and an increase in spending in 2014–15 suggests the Ministry of Health and Family Welfare intends to allocate additional resources to the health sector.

Public Health Expenditure and Economic Development

Bikash Kumar Malick's (2015) Study:
• Found a significant correlation between government healthcare expenditure and GDP growth.
• Health expenditure has been effectively incorporated into national health policy, contributing to long-term economic development.
• Health expenditure has improved education and academic achievement, leading to improved health.
• Health problems have negatively impacted economic growth and overall factor productivity.
• Increased spending on health leads to a longer life expectancy and a more efficient, competent workforce.

Serdar Kurt's (2015) Study:
• Examined the impact of health expenditures on economic development, considering both direct and indirect effects.
• Found that total expenditure increases in response to rising health care costs.
• Health expenditures were adversely impacted by illnesses and accidents.
• Health care may require additional funding from the business sector.

Lyngdoh's (2015) Evaluation:
• Identified Assam and Meghalaya as the least successful healthcare infrastructure index for northeastern Indian states.
• Tripura and Mizoram were deemed the most successful.

Houeninvo's (2015) Study:
• Used panel data encompassing 43 African nations from 1996 to 2012.
• Healthcare expenditure and the efficacy of its administration are the primary indicators of actual resource availability and quality.
• Recognized limitations in conceptualising thresholds and non-linear relationships.

Chatterjee and Laha's (2016) Study:
• Demonstrated a clear correlation between the level of government funding and the quality of public healthcare services in Indian states.

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• Suggested nations must learn from West Africa's Ebola crisis to enhance a nation's health security and economy.

Vora (2016) and Maswadeh (2016):
• Identified a significant increase in revenue receipts, capital receipts, revenue expenditures, capital expenditures, planned expenditures, and unplanned expenditures.

Mohanty, A.R., & Mishra, B.R. (2017):
• Demonstrated a unidirectional causal relationship from tax income to spending.

S. Santhanalakshmi and S. Malathi state (2017):
• Analyzed government expenditure on health in India from 2001 to 2015.

Mohammad Ashfaq (2017):
• Estimated a progressive growth in revenue and capital accounts.
• The Indian government has set a target of enhancing health expenditure.

Richardson Kojo Edeme et al. (2017):
• Found a correlation between public health spending and positive health outcomes.
• Advocated for a more strategic allocation of resources to the health sector to enhance health outcomes and economic standing.

Impact of Financial Factors on Health Information Management in India

Health Indicators Influencing Public Spending on Healthcare
• Health infrastructure indicators such as hospitals, physicians, nurses, dispensaries, and primary health centres are influenced by public health expenditure.
• Health indicators are the principal determinants of government expenditure on healthcare.

Public Health Spending and Health Sector Performance
• Rana et al. (2018) found a direct correlation between healthcare spending and health sector performance in 30 OECD countries.
• Boachie et al. (2018) showed that public health investment in Ghana positively influenced health outcomes.
• Sinha (2018) argued that the Rashtriya Swasthya Bima Yojana, a health insurance program initiated by the government in 2008 for low-income individuals, did not reduce the likelihood of incurring severe financial burdens from healthcare costs.

Cassamic Health Expenditure
• Anamika Pandey, George B. Ploubidis, Lynda Clarke, and Lalit Dandona (2018) conducted an analysis of catastrophic health expenditure.
• The percentage of catastrophic health expenditure increased threefold in the lowest income quintile and one and a half times in the highest income quintile

Public Health Expenditure and Private Companies
• Nilachala Acharya (2019) indicated that public health expenditures have increased, while private companies are benefiting from this trend.
• The insurance model guarantees coverage of public expenditures, irrespective of the level of involvement from a private partner.

Public Health Spending and its Effects Across Various Indian States
• Kausik Stenberg et al. (2019) examined public health spending and its effects across various Indian states.
• Nyamuranga and Shin (2019) utilised panel data from developing nations and the 16 countries within the Southern African Development Community to illustrate that public health expenditure significantly affects the reduction of infant and under-five mortality rates.

Public Health Expenditure in India
• The 2019 report by the Comptroller and Auditor General of India (CAG) indicates that public health expenditure in India is confined to a range of 1.02–1.28 percent of GDP.
• The National Health Profile-2018 reports that in 2015, India's public health expenditure constituted 1% of GDP, ranking as the second-lowest in the South-East Asia region.

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Impact of Government Health Spending on Health Outcomes

Key Findings:
• Population, per capita income, and the number of hospitals positively influence government health expenditure.
• The study examines the correlation between public health expenditure and various health outcomes in India, including child and neonatal mortality rates, total fertility rates, tuberculosis incidence, and the proportion of underweight infants at birth.
• The research aims to analyze the effects of various components of health spending from a national perspective.

Key Findings:
• Significant underfunding of public health in the 2019 federal budget.
• The total health budget increased by approximately 8500 crores in 2019–20 relative to 2018–19 (base year), suggesting a transition from public health to an insurance-based model.
• The National Health Mission (NHM) is tasked with enhancing the public health system through the National Rural Health Mission (NHRM) and the National Urban Health Mission (NUHM).

Impact of Governance on Health Outcomes:
• Kaijun et al. (2020) proposed a positive correlation among medical system governance, population composition, health, and healthcare resources in China.
• Yaqub et al. (2012) found comparable results in their evaluation of the effectiveness of public health expenditure in Nigeria.

Impact of Public Health Expenditure on Health Outcomes:
• Mohanty, Ranjan Kumar, and Deepak Kumar Behera (2020) examined the impact of public health expenditure on various stages and health outcomes from 2005 to 2016.
• Per capita health care spending positively influences life expectancy and vaccination rates, while negatively impacting newborn mortality, child mortality, and malaria cases.

Recommendations for Policymakers:
• Enhance public health to rapidly improve the health of Indian states.
• Use a comprehensive data set encompassing 59 countries from 1990 to 2019 to examine the relationship between government spending and GDP growth.
• Elevated county-level spending on social programs and infrastructure could improve life expectancy at birth.

Research Findings:
• Per capita income significantly influences health.
• Political stability and the absence of terrorism have the most significant positive impact on health expenditure.
• More expenditure and larger budgetary allocations specifically for healthcare do not necessarily lead to improved health outcomes in Indian states.

CONCLUSION:

India spends substantially less on healthcare than other developing and prosperous countries, with public health spending per capita accounting for one-seventh of private health services. Despite advances in health measures, India still has high morbidity and death rates. Public spending has not resulted in the desired economic growth and quality of life improvements. The link between government healthcare spending and GDP growth is experimentally connected, with income having a considerable influence.

Inadequate budget management is a major contributor to inefficient health spending in Nigeria. The Indian government's national health plan is to provide an appropriate level of health for the Indian people via decentralisation, equality, accessibility, and low-cost private healthcare. Capital investment has a stronger long-term beneficial effect on output than revenue spending, and it reduces inflation volatility by removing structural constraints. Political participation, infant mortality rates, urbanisation, female literacy, and per capita income all have an impact on Indian public health spending

Public health spending has been shown to contribute to long-term economic development by boosting education and academic success, resulting in better health, but adversely impacting economic growth and total factor productivity.

Hospitals, doctors, nurses, dispensaries, and primary health centres all have an impact on public health spending. Health indicators are the primary drivers of government spending on healthcare. In 30 OECD nations, studies

established a clear association between healthcare expenditure and health-care sector performance. Public health investment in Ghana has a favourable impact on health outcomes, however the Rashtriya Swasthya Bima Yojana does not lessen the chance of suffering significant financial burdens from healthcare bills.

Cassamic health spending has risen thrice in the lowest income quintile and one and a half times in the richest income quintile. Public health spending has grown, with private enterprises profiting from the trend. In India, public health spending is limited to 1.02-1.28% of GDP. Key results include population, per capita income, and the number of hospitals that positively influence government health spending. Governance is positively related to health outcomes, and per capita health care expenditure impacts life expectancy and immunisation rates.

Policymakers could enhance public health in Indian states by employing a comprehensive data collection spanning 59 nations from 1990 to 2019, as well as increasing county-level expenditure on social programs and infrastructure.

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