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Health Financing in the Pursuit of Sustainable Development Goals: An Examination of Global Averages and Turkey's Position

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Abstract: In the quest to achieve Sustainable Development Goals (SDGs), health economics and the financing of health expenditures emerge as pivotal elements. This literature-based exploration delves into the intricate nexus between health financing and sustainable development. Interpretations of pertinent data tables suggest that the financing level of health services at the household level is typically below the global average, indicating a prominent gap in health financing development. Specifically, Turkey's stance on health financing is evaluated against global benchmarks, highlighting its unique challenges and opportunities. This research underscores the intrinsic relationship between health financing and sustainable development, emphasizing the imperative for ongoing evaluation and enhancement in this domain to foster sustainable progression. Notably, the study refrains from employing statistical methodologies, relying solely on literature assessments and data table interpretations. Health financing, pivotal to sustainable development, invariably demands continual advancements and research.

Keywords: Health economics; Health services; Health expenditures

1. Introduction

The domain of health economics has progressively evolved since the 1960s, emerging as a distinct field distinct from traditional economics (Mwabu, 2007; Folland et al., 2016). It encompasses the analytical processing of health-related data through an economic lens and draws insights from disciplines such as finance, public finance, insurance, econometrics, and labor economics (Sloan & Hsieh, 2017)

Historically, while textual references to health economics span various eras, a marked surge in its popularity was observed in the 1960s. The Medical Economics Bureau, established by the American Medical Association in 1931, aimed to ensure the financial protection of basic treatment processes. It stands as the first global institution to undertake significant endeavors that could be contextualized within health economics. Concurrently, there has been a notable expansion in resources invested in the health sector by countries annually. This influx has elicited questions regarding the optimization of allocated funding on both micro and macro scales. Health economics, as a specialized subfield, emerged in response to these imperatives, striving to ensure that allocated healthcare funds are utilized both appropriately and efficiently (Santaş, 2017).

Several factors have been cited for the proliferation of health economics as a field (Fuchs, 1974):

- The comparison between human demands and resources underscores the scarcity of available resources. Consequently, not all human wants can be adequately addressed.
- Resources possess alternative uses, giving rise to the concept of opportunity cost.
- Individual preferences differ, with individuals inherently prioritizing their own needs over those of others.

Healthcare services are accessed by a majority of individuals, at least annually, with consumption patterns showing an uptick in older age demographics. The financing of such demanded health services poses significant challenges for central governments. It has been noted that both entrepreneurs and employees offset public health service costs through the taxes and health insurance premiums they remit (Sloan & Hsieh, 2017).

In the aftermath of the United Nations (UN) Conference on Environment and Development, convened in Rio

de Janeiro in 1992, sustainable development was posited as a panacea to global economic, environmental, and social challenges. The conference report outlined 27 core principles, with the inaugural and fourteenth principles foregrounding health concerns within an environmental context. Pertinent themes, such as health access, the state of health services, and the symbiosis between good health and environmental health, were accentuated within the report's purview (United Nations, 1993).

2. Methodology

As countries strive to achieve sustainable economic development goals, the significance of health expenditures and their financing has been increasingly observed. An extensive body of literature has been dedicated to this subject, given its growing relevance in contemporary research contexts. A strong link between sustainable economic development and actual health expenditures has been identified in existing literature. Owing to this linkage, it has been posited that health expenditures play a contributory role in economic growth. The impact of public health expenditures on the economic growth of nations has been investigated. An objective of this study involves contrasting Turkey's health expenditures and the financing thereof with global trends, aiming to augment the existing body of literature.

2.1 Sustainable Development Goals and Health Financing

The term “sustainable development” was formally defined in the 1987 “Our Common Future” report, commonly referred to as the Bruntland Report, as “development that meets the needs of the present without compromising the needs of future generations” (World Commission on Environment & Development, 1987). This concept is traditionally recognized to have three fundamental dimensions: economic, social, and environmental. In the realm of sustainable development, advancement across all these dimensions is sought, rather than isolated progress in individual sectors.

Differing definitions of sustainable development have been presented in literature. Some scholars have described it as 'economic development that ensures equity and opportunity for the global populace, efficiently leveraging the world's limited resources'. In contrast, others have succinctly defined it as 'enhancing human quality of life in an environmentally-respectful manner'. Despite the variance in definitions, a consensus recognizes the environment, economy, and social factors as integral components of sustainable development (De Kruijf & Van Vuuren, 1998). Major strategies adopted by nations to realize sustainable development goals encompass:

- Environmental preservation and enhancement,
- Fostering a just and healthy society,
- Nurturing a sustainable and competitive economy,
- Effective governance, and
- Contributing to global sustainable development initiatives (Adshead et al., 2006; Jeffery, 2006).

At its core, sustainable development strives to enhance the comprehensive well-being and quality of human life in a manner that safeguards the prospects of future generations. Empirical evidence has elucidated the detrimental health effects of environmental degradation, such as air pollution and exposure to toxic wastes. Similarly, socio-economic challenges like social isolation, disrupted family dynamics, poverty, and economic insecurity have been indicated to negatively impact health, particularly among economically disadvantaged groups. These insights underscore the interdependency between sustainable development and a healthier society (Porritt, 2005).

2.2 Health Economics

The framework of health economics examines both the supply and demand of health services. This structure delineates the intersection of supply and demand within the health market, illustrating the mechanism of their exchange. The intricacies of health economics are highlighted when one considers the extant demand for health services, the introduction of diversified health services to meet this demand, the establishment of their prices, and the financing modalities adopted.

Seminal works in health economics have underscored the contributions of several luminaries. Notably, Mushkin's endeavors in the 1950s, followed by Arrow in 1963, and later by Culyer and Pauly in the 1970s, are deemed pivotal. These scholars are credited with pioneering efforts highlighting the distinctions of the health market from other commercial arenas. The momentum in recognizing health economics as an independent field of study can be attributed to the seminal article, “Toward A Definition of Health Economics,” penned by Selma Mushkin in 1958. In this treatise, special emphasis was placed on the escalating advancements in medical technology and the consequent economic implications. Furthermore, it was in this article that domains such as the health market and health outcomes pricing were systematically broached for the first time.

A bidirectional and direct linkage between health and social welfare has been observed. The health stature of a population is found to directly influence social welfare. Furthermore, an indirect impact on social welfare is

postulated, contingent upon fluctuations in the production of goods and services, attributable to the collective health status of a society (Over, 1991).

2.3 Health Services

For an individual, achieving a healthy life is recognized as a paramount necessity. Critical considerations revolve around the methods and timing of addressing this requirement. Even though this individual-centric necessity might be misconstrued as a mere comfort, its implications on social interactions, professional commitments, and familial responsibilities render it a broader societal concern. Consequently, challenges surrounding the provisioning, administration, sponsorship, and volume of health services emerge as pivotal considerations (Alpugan, 1984).

Three principal categories have been postulated for health services: preventive health services, therapeutic rehabilitation services, and rehabilitation services (Altay, 2007).

Since 1992, efforts have been made by Turkey to amalgamate the principles of sustainable development within national frameworks. In this endeavor, while economic proliferation has been sought, a heightened impetus and political patronage have been rendered to the dual tenets of societal progression and ecological conservation (Bayazit, 2017). For instance, the National Health Policy, promulgated in 1993, encapsulated five predominant themes with thirty delineated objectives. Under the secondary theme, environmental health was explored with six specified objectives. Sustainable Development and Health, categorized as the tertiary theme, encompassed societal health education and nutrition as the two principal objectives.

2.4 Health Expenditures

The proportion of health expenditures relative to a nation's Gross Domestic Product (GDP) is often employed as a criterion for gauging the developmental stage of countries. Through the assessment of the fraction of health expenditures in relation to the GDP, insight is gained into what segment of a country's total economic prowess is directed towards the provision of health services (Sayim, 2017).

Being pivotal to the realization of a welfare state, health expenditures constitute a significant chunk of outlays across a vast majority of nations. It was observed that in 2010, EU member states allocated, on average, 9% of their GDP towards health-related spending. Driven by technological advancements, population surges, and extended life expectancies, such expenditures are predicted to experience an upswing (Kurun & Rakici, 2016).

2.5 Financing of Health Services

Health-related outlays, which command significant weightage both at individual and societal tiers, continue their upward trajectory. A substantial fraction of national incomes at the country level, as well as personal incomes at the individual stratum, is allocated towards health expenditures. Consequently, the matter of health service financing frequently emerges at the forefront of socio-economic discussions (Çelik, 2016).

While the magnitude of a nation's total health expenditures provides an indication of the emphasis placed on health and the economic developmental trajectory, attention must also be paid to the distribution between public and private financing. In settings where public health allocations are lean or where the breadth of health-related public social security provisions is restricted, the onus often falls on individuals to facilitate health expenditures either directly from their pockets or through private insurance mechanisms to secure apt health coverage (Sayim, 2017).

For the actualization of the right to holistic health, as delineated in global conventions, it becomes imperative that health services remain accessible to the entire populace. In this vein, the financing of health services should be orchestrated with efficiency, efficacy, and consistency. Over recent decades, the financing dynamics of health services, spanning from developed nations to their developing counterparts, have garnered heightened significance.

As for the methodologies governing the financing of health, various avenues have been identified, including tax revenues and financing, medical savings accounts, direct out-of-pocket expenses, private health insurance, and social health insurance modalities (Sevinc & Yilmaz, 2020).

2.6 Financing Methods of Health Services

The magnitude of aggregate health expenditures within a nation can serve as an indicator of the significance attributed to health and the state of economic development. However, the dichotomy between public and private contributions towards these expenditures requires scrutiny. In environments where allocations to public health are constrained, or where the scope of health-centric public social welfare is circumscribed, the responsibility frequently shifts to individuals. It is often observed that individuals resort to direct out-of-pocket transactions or leverage private insurance channels to secure satisfactory healthcare provisions (Sayim, 2017). Conventionally,

three principal sources for financing health services are identified: public, private, and mixed.

Furthermore, when elucidating the mechanisms for provisioning monetary support to cater to the requirements of health services, this process is succinctly termed as health service financing. While modalities of health service financing exhibit variation across nations, a general classification can be proposed:

(1) Public Finance

- Bismarc Model (Employed predominantly as Mandatory Social Insurance Method)
- Beveridge Model (Primarily leveraging the General Taxes Method)

(2) Private Financing

- Mobile Payment Method
- Private Insurance Method

(3) Mixed Financing

Public Financing: This mode of financing employs financial resources such as general taxes, special taxes, and premiums. It utilizes two distinct models: the Bismarck Model and the Beveridge Model.

(1) Bismarck Model: Also referred to as the compulsory social insurance method, the financing in this model is predominantly derived from automatic, monthly premiums paid by citizens. These premiums, determined by the state, primarily originate from employees' and employers' wages or payrolls, with state contributions to publicly managed insurances (Güvenek, 2015). This model, first conceived in Germany by Otto Von Bismarck in 1883, becomes "general health insurance" when covering all societal segments. A defining feature is the provision of equal care to all premium payers. The risk, therefore, is distributed equally across the population, with premiums allocated based on the risk group rather than the level of illness risk.

(2) Beveridge Model: This model, also known as the general taxation and financing method, was first proposed in the Beveridge Report prepared in England in 1942. It describes the economic policies necessary for establishing a comprehensive national health care program. Unlike the Bismarck Model, it does not necessitate a separate private organization for health services. Public revenues are gathered into a common pool and allocated to each sector. The challenge arises when sectors compete for a sufficient share from this pool. If a country maintains a robust fiscal policy, financing health care through taxes has significant advantages due to the size of the generated tax fund (Çelik, 2016). Financing health services with general tax revenues is a crucial collective tool that enables all individuals to access health services and share societal risks.

Private Financing: This financing type consists of two methods: the Out-of-Pocket Payment Method and the Private Insurance Method.

(1) Out-of-Pocket Payment Method: In this method, when health care services are required, individuals finance the cost from their immediate resources. This method may not present issues for high-income individuals but poses significant challenges for the majority of society in the low-income group. As health services are high-cost, the charges for the services received are also elevated. Therefore, low-income individuals may not access these services despite their need. Furthermore, the absence of a risk distribution mechanism means if health care is not required, there is no expenditure or deduction from the individual's budget. Conversely, when health care is needed, all expenses must be met by the individual.

(2) Private Insurance Method: This method is akin to the Bismarck Method, but the insurance is managed by private companies operating under free market conditions. The amount of premium to be paid varies as individuals desiring insurance are divided into different risk groups. Therefore, high-risk groups such as the elderly or children pay a higher premium, while young and middle-aged individuals pay a lower premium. The scope of health services to be received can differ according to the health insurance policy, and it may not cover all health services or provide unlimited health service financing. In this method, risk distribution is made only among the individuals with health insurance, and this system does not cover retirement and disability.

Mixed Financing: This method integrates all the above methods, allowing for the simultaneous operation of the public sector, the private sector, and individuals in health services financing.

3. Results

3.1 Health Expenditures Data for Turkey

Analyses of 'Current health expenditure (% of GDP)' data in Figure 1, retrieved from the World Bank Open Data website, indicate that Turkey's peak health expenditure occurred in the year 2009. A downward trend is observed in health expenditures from 2008 to 2015. A subsequent rise in health expenditures is noted between 2015-2016, followed by another decline between 2016-2018. An upward trajectory in health expenditures is evident from 2018 to 2020.

In Figure 2 the data further reveals that the year with the most significant proportion of 'Domestic general government health expenditure (% of current health expenditure)' in Turkey was also 2009-2010. It is of interest to note that, globally, the level of domestic general government health expenditure, as a percentage of current health expenditure, has consistently been much lower than that in Turkey. This suggests that the proportion of

domestic general government health expenditure in Turkey is considerably higher than the global average.

Prior to 2008, the data indicates in Figure 3 a high level of 'Out-of-pocket expenditure (% of current health expenditure)' in Turkey in comparison with the global average. In all periods 'Out-of-pocket expenditure (% of current health expenditure)' in Turkey lower than world level.

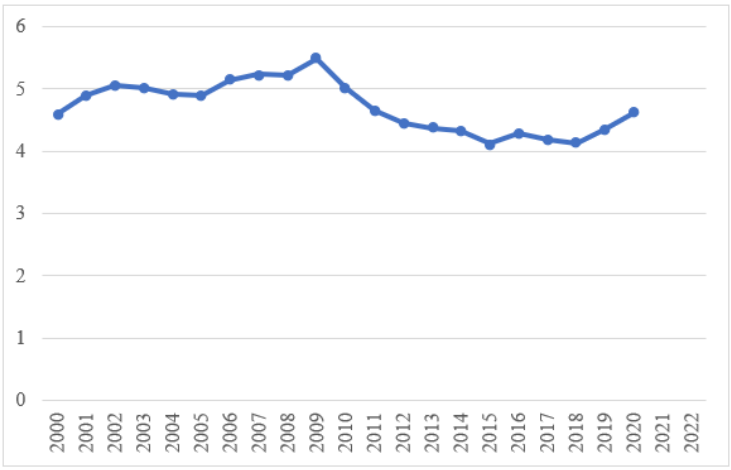

Figure 1. Current health expenditure (% of GDP)-Turkey
Source: data.worldbank.org, 20.04.2023

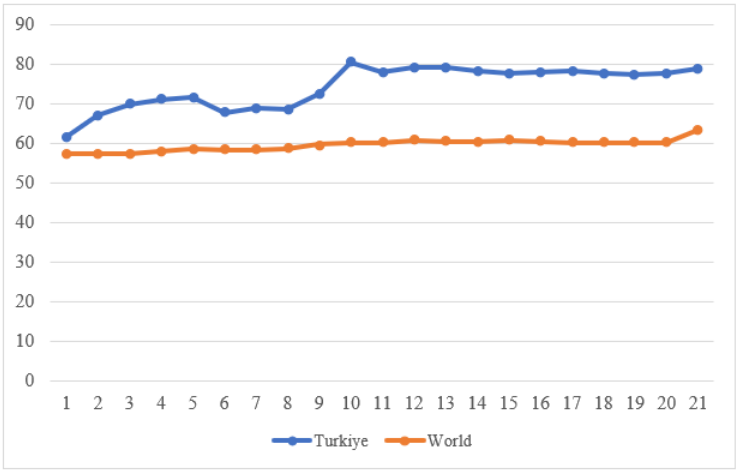

Figure 2. Domestic general government health expenditure (% of current health expenditure)-Turkey, Global
Source: data.worldbank.org, 20.04.2023

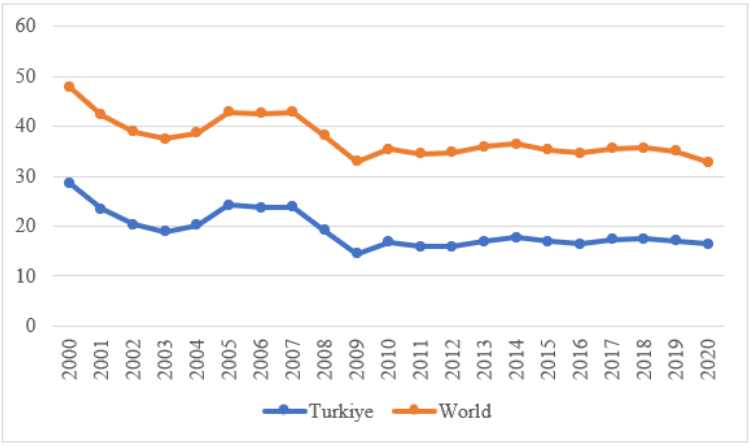

Figure 3. Out-of-pocket expenditure (% of current health expenditure) - Turkey, Global
Source: data.worldbank.org, 20.04.2023

4. Discussion

The interplay between a country's economic growth, sustainable development goals, and health expenditures has been highlighted repeatedly. This investigation aimed to juxtapose Turkey's health economy, health expenditures, and financing levels with global trends, utilizing secondary data represented as tables and graphs. Interpretation of these data yielded several key findings.

The data analysis reveals that the zenith of Turkey's health expenditure took place in 2009. This finding not only provides insight into the country's health economy but also serves as a benchmark for further analyses. The trend also suggests an evolution in the Turkish health system, an aspect that deserves future research for a comprehensive understanding of its implications.

In comparison to global trends, it emerges that the burden of health service costs shouldered by households in Turkey is lower. This is evidenced by the proportion of 'Out-of-pocket expenditure (% of current health expenditure)', which in Turkey is markedly lower than the global average. This result is noteworthy, given the targeted objectives of Sustainable Development Goal 3 (SDG target 3.c), which emphasizes the importance of reducing the financial burden of health services on households.

5. Conclusions

Health, a fundamental value integral to human life, is akin to basic elements such as freedom and education (Sen, 1999). In addition to its intrinsic value, health is also recognized as a pivotal input for long-term economic growth and development (Green, 2007; Jack & Lewis, 2009).

The concept of sustainable development, which has evolved and expanded since the 1970s, has been the subject of numerous international summits. Reiterated in summit declarations is the assertion that contemporary development should not impede future growth and that global development should be a collective endeavor. Within the framework of sustainable development, health has emerged as a critical area, gaining continuous and escalating significance. The consensus in these reports is that development is unattainable in the absence of health. Most discussions on the influence of health on growth or development have been primarily within the context of economic development. The role of health on economic development/growth has been explored through hypotheses relating to labor productivity, which has a direct effect, and the incentive effect, which is indirect (Bloom & Canning, 2009; Kunze, 2014).

The provision of health services and their financing are instrumental in achieving robust and sustainable economic development goals. Human capital, a fundamental and vital production input, relies heavily on the health of individuals. Only healthy individuals can contribute effectively to economic development. Therefore, the provision of health services by states and their accessibility to all households at no or minimal cost are prerequisites for a welfare state.

Health financing, a key objective of Sustainable Development Goal 3 (SDG target 3.c), is also critical to achieving universal health coverage - a state where quality health care is accessible to all without financial hardship.

An examination of Turkey's health system reveals a gradual development. Graphical representations suggest that the peak of health expenditure took place in 2009 and 2010. Compared with global data, it can be inferred that the cost borne by households for accessing health services is lower in Turkey. The proportion of households paying out-of-pocket for health care is relatively low, indicating that the state finances health services to a greater extent than in other parts of the world. This finding underscores the importance of state involvement in health financing to ensure accessibility, equity, and financial protection for all citizens.

Data Availability

The data used to support the research findings and the software code/commands are available from the corresponding authors upon request.

Conflicts of Interest

The authors declare no conflict of interest.

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