Introduction

According to the United Nations Development Programme (2022), the COVID-19 health crisis set human progress back five years. Health has been an essential part of development for two decades, from the Millennium Development Goals to the Sustainable Development Goals. However, it is questionable how health is at the centre of development since health usually does not hold the largest share of government spending. For example, the United States government will spend twenty-one per cent of the 2025 Fiscal Year federal budget on social security and eighteen per cent on national defence, and health comes third with only fifteen per cent (see the U.S. Treasury, 2024).

This essay will argue that the recent COVID-19 crisis demonstrated the centrality of health to development from several aspects: theoretical foundations in Sen and Grossman, health capital and economic growth, and real-world examples of Nigeria. In the first section, the essay will discuss the academic voices to highlight the centrality of health to development and explain why health is central to development. The second section will discuss how the COVID-19 crisis emphasises this relationship and present Nigeria's experience to illustrate how health crises affect economic development by undermining health capital. Finally, the last section will indicate some limitations of this essay and close the discussion with a conclusion.

Theoretical conceptualisation for the centrality of health to development.

This section will conceptualise the centrality of health to development from three dimensions: key foundational thinkers, economists' health human capital and the politics of health. Therefore, this section will primarily tackle the political economy and the theoretical conceptualisation of health in the scope of development studies, highlighting the connection between health and development.

Amartya Sen is arguably the first scholar to address development issues systematically through the health lens. Sen lays the groundwork for understanding

health as a critical component by redefining development. He greatly expanded the definition of development by extending its measurement: Before Sen, development was narrowly defined by economic growth, industrialisation, or modernisation (Thorbecke, 2007). Innovatively, Sen introduced the consideration of health, social opportunities, and freedom into the process of conceptualising development (Sen, 1999). This broader perspective inspired scholars and policymakers to measure development more comprehensively.

Inspired by Sen, Bloom, Canning and Sevilla (2004) indicated that good health plays a major role in economic growth. According to Gyimah-Brempong and Wilson (2004: 315), health human capital positively impacts multiple countries' per capita income levels worldwide. Thus, health is not merely the essential source of happiness and well-being of individuals; it also increases national output (Grossman, 1972; World Bank, 1993). Michael Grossman was the first scholar to incorporate health as a form of human capital and construct a theoretical foundation for researching the demand for health (Grossman, 2005; Chen, 2024). The essence of Grossman's theory is that health is both the demand and product of the market/economy participants. Individuals in the economy are constantly investing in themselves to stay healthy, which includes spending on medicines, surgeries, and doctors. In the process of spending, health is produced as a product. In addition, those individuals are forced to work and engage in the market economy to afford those expenses. As a prerequisite for work, they also need to be healthy. Therefore, the economy is more prosperous and vibrant when the economic actors are generally healthy. In contrast, when they are affected by serious diseases, the economy loses vitality because the labour supply, productivity, income and growth are affected and reduced (see Bleakley, 2010). Grossman's work underlines the importance of investing in improving health conditions and the healthcare system as a crucial means of accumulating human and health capital, achieving sustainable development, improving social welfare, and reducing poverty (von Schirnding, 2005; Sen, 2006).

The concept of human capital, especially health capital, is the key to unpacking the interconnection between health and development. In addition to extensive empirical research addressing human capital's contribution to economic growth (see Chaabouni and Mbarek, 2024), this interconnection has been noticeable during the AIDS epidemic. Two decades ago, Poku (2000) discussed the social and economic impact of HIV on societies and communities across Sub-Saharan Africa in detail. According to Poku (2000: 39), AIDS has caused fourteen million deaths in Africa since 1983. In the political arena, Poku and Mdee (2011: 99) considered poor health to be perhaps the starkest indicator of political failure, as well as the description of the continent. Linking the AIDS crisis back to Sen's freedom and Grossman's human capital theory, this political failure is characterised by substantial mortality caused by HIV and severe long-term economic consequences (Dixon, McDonald and Roberts, 2002; Stover and Bellinger, 2002). Through the lens of healthy human capital, HIV was undermining economic growth by damaging human capital. According to McDonald and Roberts (2006) econometric analysis, a 1% increase in the HIV prevalence rate results in a marginal decrease of 0.59% in income per capita in Africa.

In summary, health is central to development because good health is dually an outcome and a pillar of development. The centrality of health to development is highlighted by the foundational work of scholars such as Sen and Grossman, who included health when conceptualising development and human capital. Studies on AIDS in Africa might be dated; however, they are still insightful for evaluating the impact of the recent health crisis because these two pandemics showed a similar pattern in terms of undermining health capital and challenging the healthcare system. The COVID-19 pandemic has further underlined this link between development and health; thus, it will be discussed in the following section.

Lessons from COVID-19 Pandemic: Health Crisis or Development Crisis?

Both science and social science disciplines have extensively reflected on and discussed the COVID-19 pandemic (hereafter, "pandemic") in recent years. From the

health perspective, the pandemic posed significant public health challenges and resulted in substantial global mortality. It also leads to a severe mental health crisis, including alarming increases in depression, anxiety, alcohol misuse, and suicide risk (Pera, 2020; Dubé *et al.*, 2021; Pathirathna *et al.*, 2022). In addition to these health impacts, according to Millard (2020), COVID-19 has caused a severe supply-side recession, disrupted supply chains, increased poverty and inequality, and triggered deep recessions in the global economy. Therefore, the recent COVID-19 crisis is a vivid example indicating the centrality of health to development since it simultaneously affects worldwide health and the economy by undermining health capital. The following paragraphs will further address this relationship between health and development through one key mechanism with data: the high mortality of COVID-19 influenced and undermined economic growth.

Firstly, through the mechanism of health capital, high mortality during the pandemic hindered and shocked economic growth. Regarding human capital in labour markets, the pandemic caused significant workforce reductions, resulting in decreased enterprise outputs, output price increases, and considerable economic costs. Through the lens of economics and health capital, the socioeconomic burden of the pandemic composes temporary human capital loss due to infections, absence from work or lockdowns, and permanent loss because of severe premature mortality rates (Deng *et al.*, 2021). Hall, Jones and Kleneow (2020) estimated that if the national mortality rate declines from 0.8 to 0.3 per cent, 20 per cent of the loss of consumption's share in national income will be avoided. While policies to reduce mortality and infection, such as lockdowns, generate economic costs and labour force reductions, Miles, Stedman and Heald (2020) studied the benefits of lockdowns in the United Kingdom setting, indicating that a three-month lockdown facilitated health capital, created economic benefits, and, particularly, each death avoided could bring an additional 22,600 US dollars. Lastly, considering macroeconomic effects at the global level, McKibbin and Fernando (2020) estimated that, based on 2020 figures, global income will decrease by 6.7 per cent in 2020.

Taking health capital into analysis by econometric models, Chaabouni and Mbarek (2024) measured the impact of the pandemic in the Eurozone and argued that a one per cent rise in COVID-19 accidents (including cases and deaths) reduced economic performance by 0.0025 per cent health capital. Their findings are statistically significant and align with Grossman's findings. Outside the Eurozone, evidence in Nigeria suggested that 32 per cent of the households had access to medical services during COVID-19, while only 20 per cent were able to afford them (Omotayo and Ogunniyi, 2024: 7). Cited in Okoroiwu *et al.* (2021), as of March 28, 2021, Nigeria is the 5th most affected African country, and the GDP fell by 23 per cent during the lockdown, while the mortality rates reached 1.3 per cent. Affected by the pandemic, the unemployment rate reached 33 per cent at the end of 2020, compared to 2018, when the unemployment rate was 23 per cent (Nigerian NBS, 2021, see Figure 1). In addition, the Gross Domestic Product (GDP) growth in Nigeria was severely stagnant from the second quarter of 2020 to the first second quarter of 2021 (ibid., 2024, see Figure 2). Nigeria's experience during the pandemic makes the correlation between health and development evident, as the health crisis undermines health capital and economic stability. The pandemic disproportionately influenced society, hindering economic growth and producing an employment crisis. This highlights the need to build a healthcare system that sustains development, especially in the face of global health emergencies.

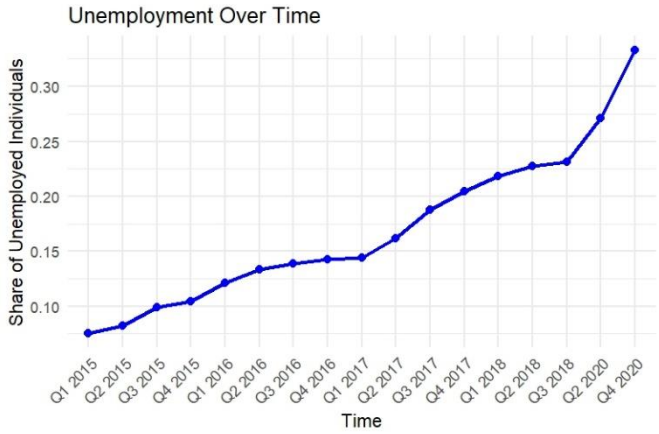

Figure 1. Unemployment Rate in Nigeria. Source: Statista

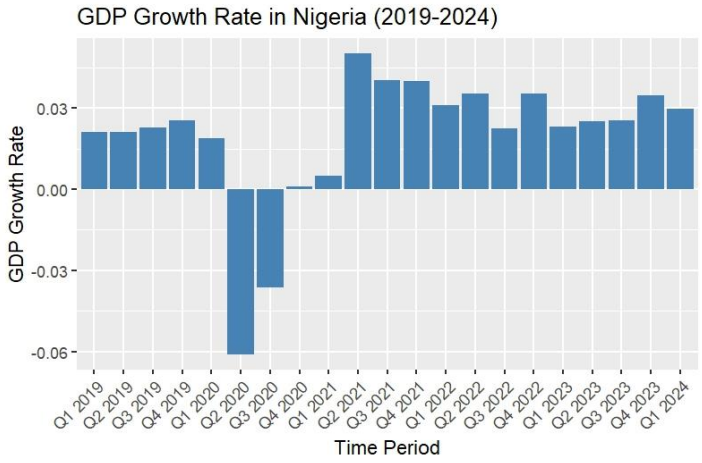

Figure 2. GDP Growth Rate in Nigeria. Source: Statista

In summary, the pandemic has underlined the critical links between health and development. The pandemic's profound impact on public health, including widespread mortality, parallels significant economic disruptions, including a recession, increased unemployment, and GDP decline. Through the lens of health capital, it is clear that the loss of human capital, whether temporary or permanent, directly hinders economic growth. The sample of Nigeria, with its high mortality and economic recession, vividly shows how health crises damage development, emphasising the significance of strengthening healthcare systems to protect both public health and economic stability in cases of future emergencies.

Limitations and Conclusion

This essay has several limitations. Firstly, due to the word limits, it fails to include discussions around inequality at the state and personal levels. For instance, considering vaccine distribution, the Northern Hemisphere countries disappointed the Global South and thus generated resentment (see Sharma, 2023). Secondly, the second section failed to address the fact that even if states shift funds from industrial subsidies to healthcare during the pandemic, it still creates significant economic benefits. For instance, Bayati *et al.* (2022) highlighted that if developing countries have vaccination rates equal to developed countries, about 38 billion dollars would be added to their GDP in the future year. Thus, simply raising the supply of vaccines would have huge economic benefits.

Including these topics in the essay would add more layers to the current analysis and provide a more comprehensive understanding of the central role of health in development. Further, the second section could be improved by additional evidence or comparison to other countries or explanations for the GDP growth rate, unemployment rates, and the GDP drop. However, due to the word limits, the second section is organised as it is now to ensure a clear presentation. Similarly, the broader theoretical and scholarly debates are intentionally left out for clarity concerns.

Despite the limitations, this essay clearly showed that the pandemic strikingly demonstrated the centrality of health to development. By significantly challenging public health and economic stability, the crisis has reinforced the theoretical foundations laid by Sen and Grossman, who highlighted the role of health in development. The pandemic's consequences, such as GDP decline, workforce disruptions, and increased poverty, highlight the direct and visible links between health capital and economic growth. Nigeria's experience further underlines the necessity of strengthening healthcare systems to minimise health crises' impacts on development. Addressing these challenges requires prioritising healthcare investments to build resilience and sustain long-term development in the interconnected global landscape.

(Word Count: 1959)

Appendix A. Quarterly unemployment rate in Nigeria 2015-2020

Time	Unemployment Rate (%)
Q1 2015	7.54
Q2 2015	8.19
Q3 2015	9.90
Q4 2015	10.44
Q1 2016	12.09
Q2 2016	13.32
Q3 2016	13.88
Q4 2016	14.23
Q1 2017	14.44
Q2 2017	16.18
Q3 2017	18.80
Q4 2017	20.42
Q1 2018	21.83
Q2 2018	22.73
Q3 2018	23.13
Q2 2020	27.10
Q4 2020	33.28

* Source: https://www.statista.com/statistics/1119375/unemployment-rate-in-nigeria-by-quarter/

Appendix B. GDP growth at basic prices in Nigeria 2019-2024

Time	GDP growth rate
Q1 2019	2.10
Q2 2019	2.12
Q3 2019	2.28
Q4 2019	2.55
Q1 2020	1.87
Q2 2020	-6.10
Q3 2020	-3.62
Q4 2020	0.11
Q1 2021	0.51
Q2 2021	5.01
Q3 2021	4.03
Q4 2021	3.98

* Source: https://www.statista.com/statistics/1193455/gdp-growth-at-basic-prices-in-nigeria/

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