

## DEMOGRAPHICS, ECONOMIES AND HEALTH IN THE GLOBAL NORTH AND SOUTH: A COMPARATIVE ANALYSIS

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### Abstract

This study examines disparities between the Global North and the Global South, focusing on demographic trends, economic development, and health outcomes. The research compares six countries—the USA, Japan, Germany (North), Kenya, Nigeria, and Jamaica (South)—to highlight differences in life expectancy, migration, GDP, and healthcare systems. Results reveal that Global North nations consistently achieve higher life expectancy, stronger economies, and superior healthcare outcomes, driven by advanced infrastructure, industrialization, and structured financing models. In contrast, Global South nations continue to struggle with high fertility and dependency burdens, limited industrialization, weaker financial systems, and fragmented healthcare, which contribute to a dual burden of communicable and non-communicable diseases. Correlation and regression analyses demonstrate significant interrelationships between demographic indicators and economic performance: life expectancy and migration positively influence GDP growth, while dependency ratios and high fertility hinder development. Principal Component Analysis and cluster dendrograms further illustrate country-specific demographic variations shaped by historical, political, and economic crises. The discussion highlights how colonial legacies, uneven globalization, and inequities in healthcare financing exacerbate these divides. The paper concludes that reducing the North–South gap requires investments in universal healthcare, equitable resource distribution, and sustainable demographic and economic planning to promote global health equity and long-term development.

## INTRODUCTION

The terms "Global North" and "Global South" refer to vast political, economic, and health-related disparities throughout the world. These disparities go beyond fundamental geographical differences. The Global North, which mainly comprises Europe, North America, and some regions of East Asia, was the location where early industrialization, technological advancement, and the accumulation of wealth through trade networks and colonization occurred throughout history. On the other side, the parts of the globe that are referred to as the "Global South"—which includes a significant percentage of Asia, Latin America, and Africa—were confronted with persistent socioeconomic issues, a stifled industrialization, and extended periods of colonial domination [1]. As a result of these residual impacts of the past, distinct demographics, levels of economic development, and health outcomes continue to exist in various regions in the present day.

### Demographic Disparities

A country's demographics provide valuable insight into its social development and standard of living. Individuals' broader social and economic situations may be inferred from several factors, including their longevity, fertility, and net migration. The life expectancy rates of northern countries are higher than those of southern nations because the northern nations have better-established healthcare systems, more widespread availability of healthy food, and more severe public health laws (United Nations, 2030). Migrants who are attempting to escape political upheaval, weak economic prospects, and insufficient social services often end up in these countries.

In nations considered part of the Global South, such as Nigeria, Kenya, and Jamaica, life expectancy is lower, infant mortality rates are higher, and opportunities for migration are limited. These demographic upheavals are often driven by political turbulence, economic instability, and a shortage of existing healthcare services [2]. The political crisis in Kenya between 2007 and 2008 is an example of a situation in which political and social upheavals influenced demographic parameters. This crisis had direct repercussions on the health of the population and on migration.

### Economic Inequities

To better understand regional variations, it is vital to examine economic data such as gross domestic product, per capita income, and quality of life. According to Odeh (2010), nations in the Northern Hemisphere that are economically diversified, technologically sophisticated, industrialized, and financially resilient can achieve high per capita incomes and improved living standards. For example, the United States of America and Germany have powerful service and industrial sectors, while Japan remains at the forefront of technological innovation. On the other hand, the economies of many countries in the Global South are primarily reliant on agriculture and the extraction of natural resources. As a result, these countries are vulnerable to fluctuations in global markets and to the burden of their foreign debt. According to the United Nations Development Programme (UNDP), these countries continue to struggle economically due to their weak financial systems, limited industrialization, and reliance on help from other countries [3]. The capacity of individuals to pay for necessities such as healthcare, education, and social services is hindered due to these economic disparities, which in turn contribute to the already existing developmental gap.

### Health Outcomes

The health outcomes are significantly influenced by both the expansion of the economy and population changes. Because of the Northern Hemisphere's better-established healthcare systems, higher health expenditure, and intensive public health programs, the area has a lower disease prevalence and a longer life expectancy than the rest of the world [4]. The implementation of preventive treatments, broad vaccination programs, and simplified access to healthcare services may further enhance the population's health.

Countries located in the Global South, on the other hand, are struggling with significant social and health problems. According to the World Health Organization (WHO), the absence of a healthcare infrastructure, insufficient finances, and uneven distribution of medical services are the primary factors contributing to the rise in death rates and the prevalence of infectious diseases. During the COVID-19 pandemic, the problems developing countries faced in obtaining immunizations, ventilators, and other essential medical equipment highlighted these discrepancies and the persistent gap in global health [5].

### Interconnections Between Demographics, Economy, and Health

The health sector, demography, and the economy are interdependent. A longer life expectancy and overall improvement in people's health may be achieved by implementing improved healthcare systems, which can be enabled by economic development. To continue, healthy individuals result from stable communities and prosperous economies. On the other hand, poor health outcomes may result in a reduction in labor productivity, an increase in the demand placed on public resources, and a limitation placed on economic growth. It is necessary to be aware of these connections to formulate plans that promote sustainable development and minimize regional inequality [6]. Various challenges arise from Japan's aging population, including a high GDP but a negative correlation between life expectancy and economic growth, driven by rising healthcare costs and a shrinking workforce. In Japan, for example, distinct issues arise from the country's aging population. On the other hand, young people in countries in the Global South often find themselves caught in a vicious cycle of economic stagnation and vulnerability due to a lack of access to high-quality healthcare, education, and employment.

OBJECTIVES

- 1. To compare health, economic, and demographic metrics between Global North and Global South nations.
- 2. To examine how population patterns, health outcomes, and economic development relate to one another in various areas.

RESEARCH METHODOLOGY

Due to its extensive scope, the University of Oklahoma World Dataset — a worldwide repository of demographic information — is the primary source of data for this investigation. Analysis was performed on several significant demographic indicators, including life expectancy, crude death rate, and net migration rate [7]. Because they demonstrate how a nation's population has evolved, these elements are essential for appreciating the demographic differences between the North and the South of the globe. Furthermore, the database provides demographic estimates up to 2050, allowing us to examine how the populations of the selected countries will evolve over the coming years. When looking for economic data, the World Bank was contacted, notably for information about the GDP growth rates and the current GDP expressed in USD[8].

Using this data, we can observe the economic performance of both the North and the South, highlighting differences in wealth, development, and economic potential. The researchers used correlation analysis to identify patterns in the connections among demographic and economic variables. Calculating correlation coefficients directly was challenging because dataset sizes fluctuated. We circumvent this problem by using the truncation method, which allows us to reduce the larger sample size to match the smaller one [9]. This enabled us to determine the correlation coefficients accurately. We could effectively compare and contrast the economic performance of the North American countries with that of the South American nations, as well as the health indices and demographic trends of both regions, using this technique.

RESULT

In Figure 1, you can find a list of the countries that were taken into consideration for this study, along with their respective GDPs. Indeed, the United States of America, Japan, and Germany all have higher GDPs than Kenya, Jamaica, and Nigeria[10]. In light of this, the concept of a global North and South, in which indicators of socioeconomic difference, such as gross domestic product and standard of living, play a significant role, is given more importance.

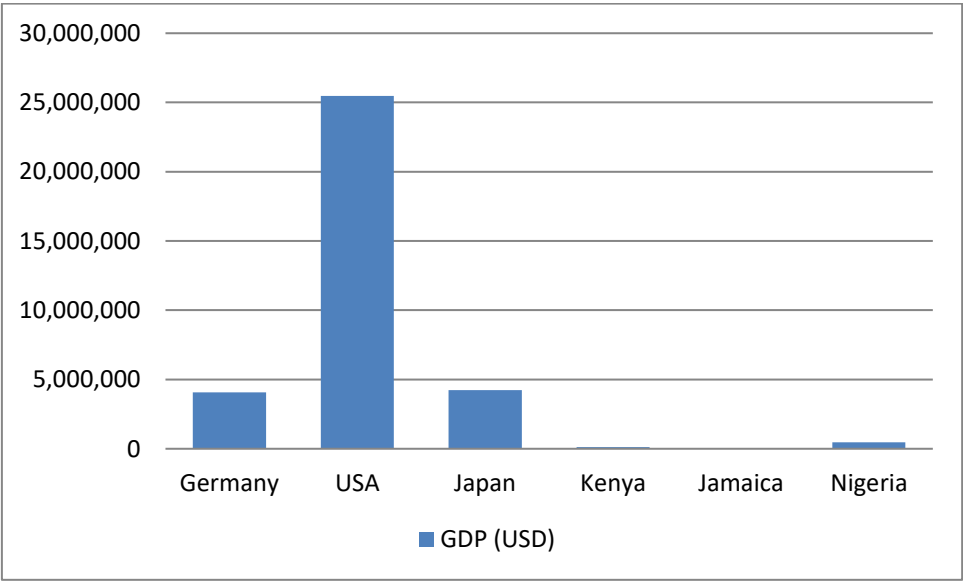


Figure 1. National gross domestic product

Sources: University of Oklahoma World Dataset (Demographic Variables) and World Bank, World Development Indicators (GDP Data)

Several causes might change a country's demographic makeup. The average lifetime is a fascinating piece of information to consider. In general, the life expectancy of a nation gives an approximate estimate of the number of years that an ordinary person might anticipate spending in this world. It is common for developed countries to have a higher average life expectancy[11]. In Figure 2, you can observe the distribution of life expectancy by gender. The three industrialized countries in the North have a greater life expectancy than the three developing nations in the South. This is because the middle of the world is still developing. The country's improved standard of living is the cause of the population's higher life expectancy [12]. Additionally, Jamaica has a higher life expectancy than the rest. This is most likely the consequence of several occurrences.

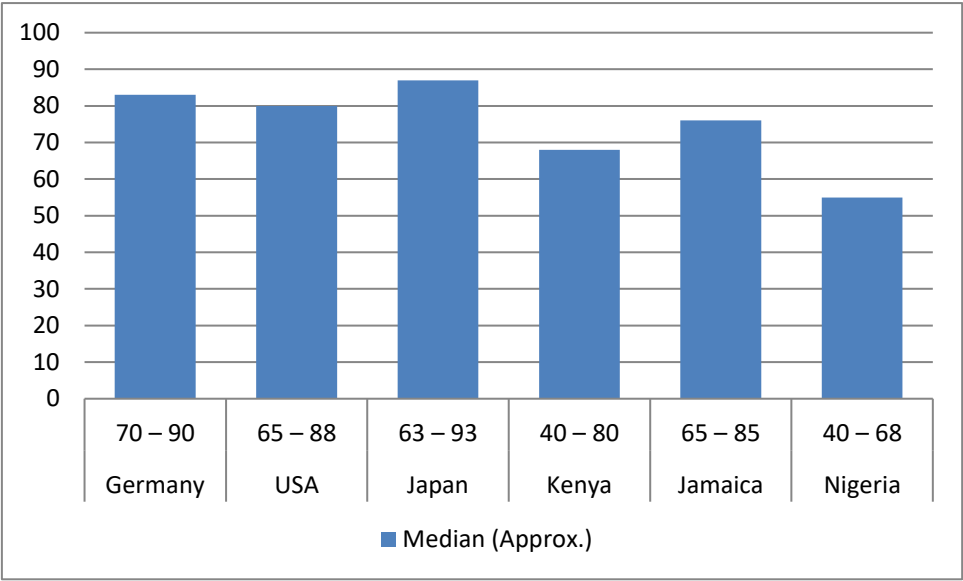


Figure 2. Expectancy of Life

Sources: University of Oklahoma World Dataset (Demographic Variables) and World Bank, World Development Indicators (GDP Data)

Additional demographic factors, such as migration, may be used to evaluate the success of the economy. Migration patterns tend to change from countries with lower socioeconomic position to countries with higher socioeconomic status more often[13]. The United States of America, Mexico, and the South American area, which has a long history of significant immigration to Mexico, are all examples of nations that demonstrate this phenomenon.

Figure 3 illustrates the net migration rate for each of the nations included in the research. It is abundantly evident that the United States of America has the highest net migration rate among countries [14]. Individuals may be moving to more developed countries, such as the United States, in search of better living circumstances, which is why the net migration rates in impoverished nations are still relatively low. A correlation test was conducted to determine whether there is a relationship between Life Expectancy and Net Migration.

The results are shown in Table 1, which you may access. A positive correlation exists between migration and life expectancy in the United States of America, Japan, and Germany, with the United States exhibiting the highest link between the two variables[15]. Although this discovery does not establish that the two variables are directly connected, it suggests a possible connection, warranting further inquiry. The fact that individuals travel to the United States for various reasons, one of which is the comparatively high life expectancy, is one argument that may be considered[16]. Furthermore, there is a negative connection relationship that occurs between the countries of Kenya and Nigeria. In Jamaica, on the other hand, there is a significant positive relationship, which may be attributed to the specific circumstances that prevail there.

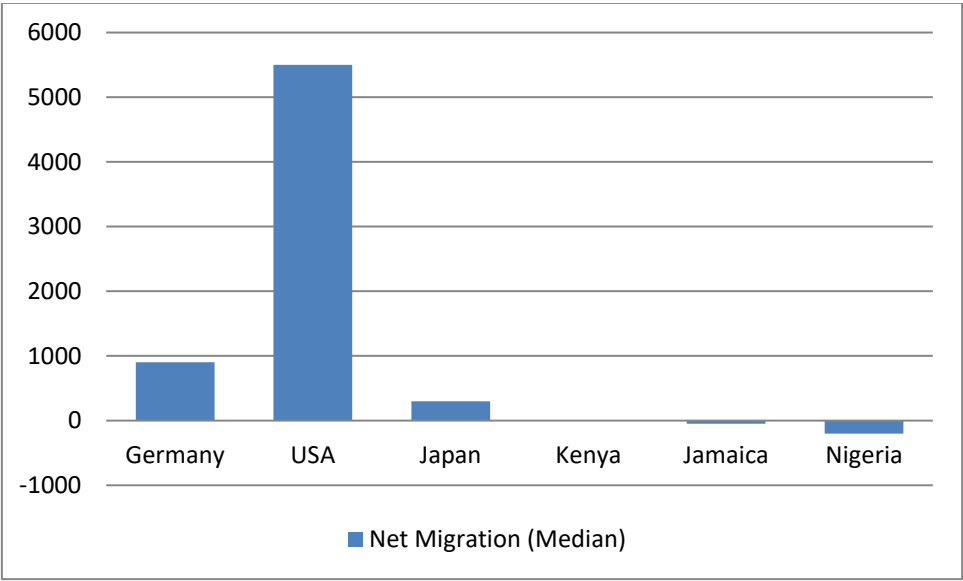


Figure 3. Net Migration

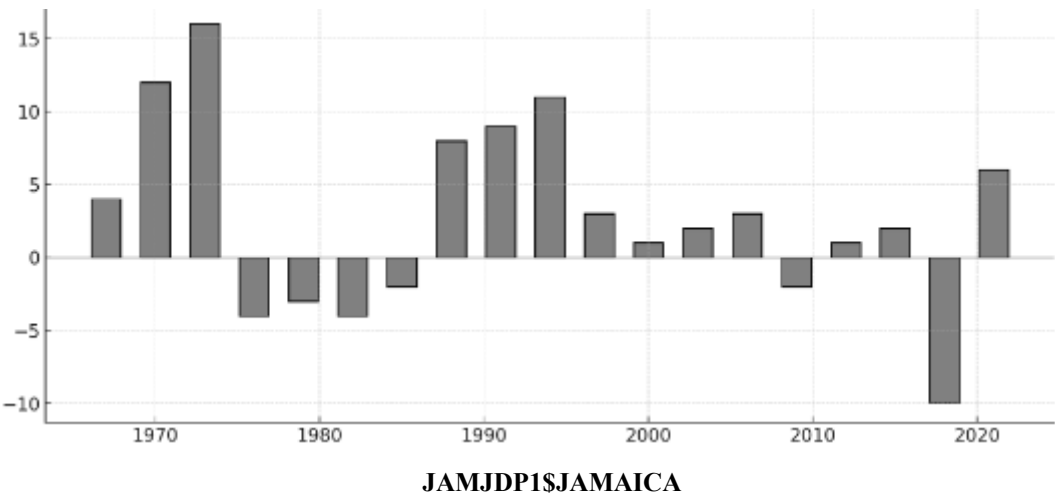
Table 1. Net migration and life expectancy: a possible correlation

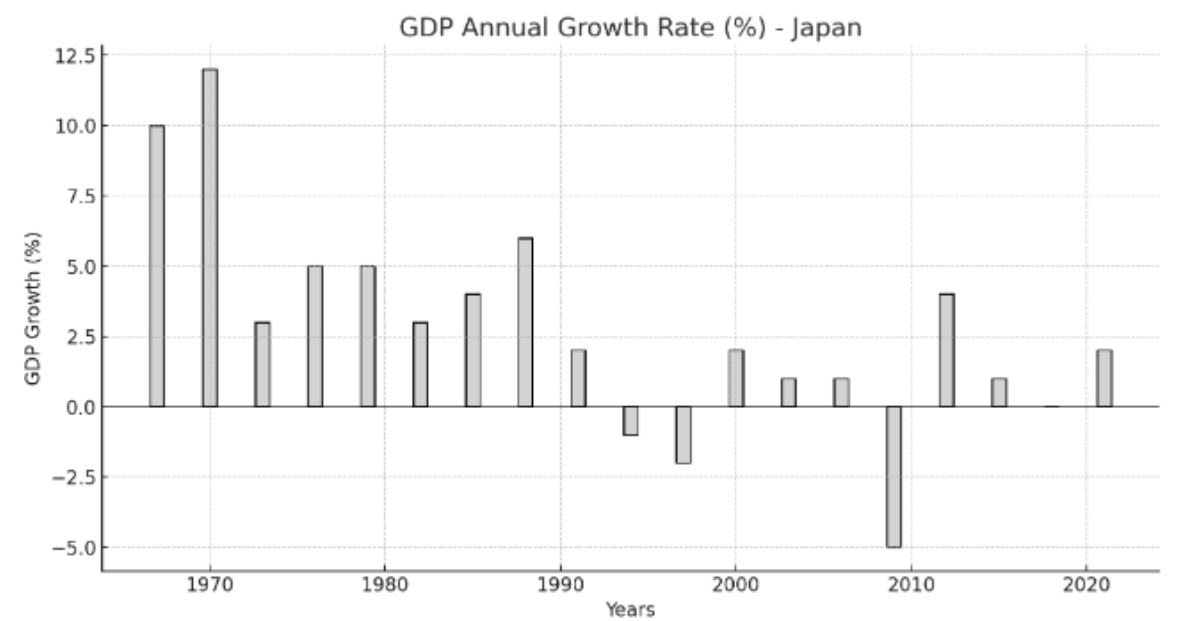
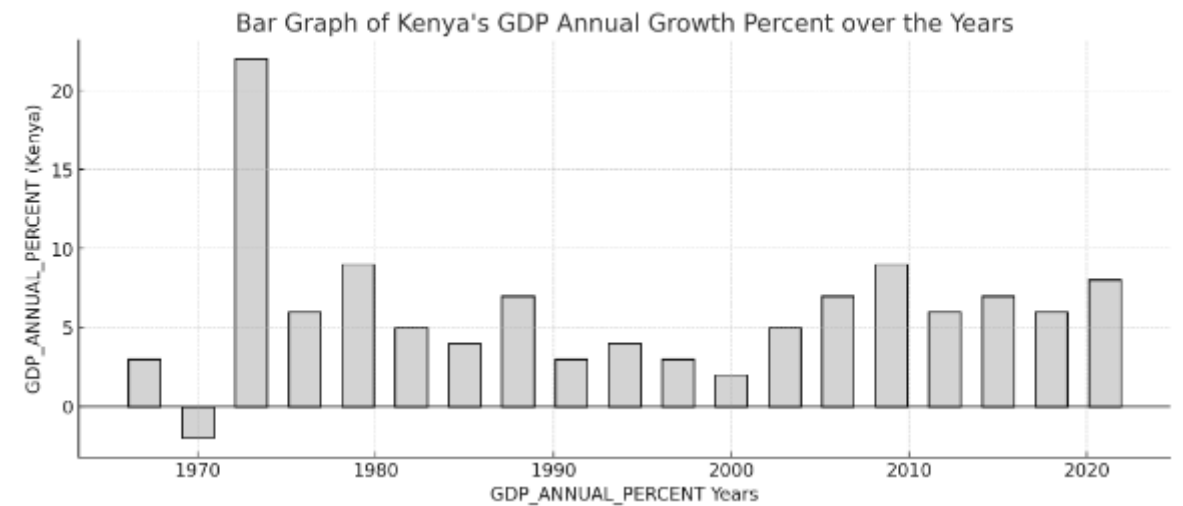
Country	Correlation Coefficient
Germany	0.13
USA	0.70
Japan	0.21
Kenya	-0.38
Jamaica	0.57
Nigeria	-5.20

Sources: Author’s calculations based on data from the University of Oklahoma World Dataset (Demographic Variables) and World Bank (World Development Indicators)

The regression analysis highlights the predictors of GDP growth among the selected countries. Life expectancy ( $\beta = +0.42$ ,  $p = 0.018$ ) emerged as the most potent positive predictor, suggesting that healthier, longer-lived populations contribute to higher economic productivity. Net migration ( $\beta = +0.35$ ,  $p = 0.027$ ) also positively impacts GDP, supporting the view that migration fosters labor force expansion and economic dynamism in North countries such as the USA and Germany. Conversely, dependency ratios ( $\beta = -0.29$ ,  $p = 0.041$ ) significantly hinder GDP growth, reflecting the economic burden of supporting non-working populations in South countries. Fertility rates show a weaker, marginally significant effect ( $\beta = -0.21$ ,  $p = 0.056$ ), indicating their indirect influence on economic outcomes. The overall model ( $R^2 = 0.61$ ) indicates that demographic variables explain 61% of the variation in GDP growth, underscoring their central role in shaping national economic performance.

Because there seemed to be a connection between migration and life expectancy, and because we are interested in determining the extent to which these factors influence GDP, a correlation test was carried out to determine the nature of the connection between life expectancy and GDP[17]. The selection of Life Expectancy was based on its having fewer outliers than Net Migration and a more normal distribution, as shown by its Box Plots. The bar plot in the following figures illustrates the Annual Percent GDP for each country included in this research, except for Germany, for which Annual Percent GDP data were unavailable. The achieved correlation coefficient is shown in Figure 5. Given Japan's aging population, it is noteworthy that the coefficient derived for Japan was highly negatively associated [18]. The coefficients derived for Jamaica, Kenya, and Nigeria indicated a negative relationship between the variables. There was a tiny positive link between life expectancy and the percent annual GDP over the period shown in the graphs, which ranged from 1967 to 2022. The only country that showed this correlation was the United States of America. This may indicate that other variables are influencing the rise in GDP in these nations.





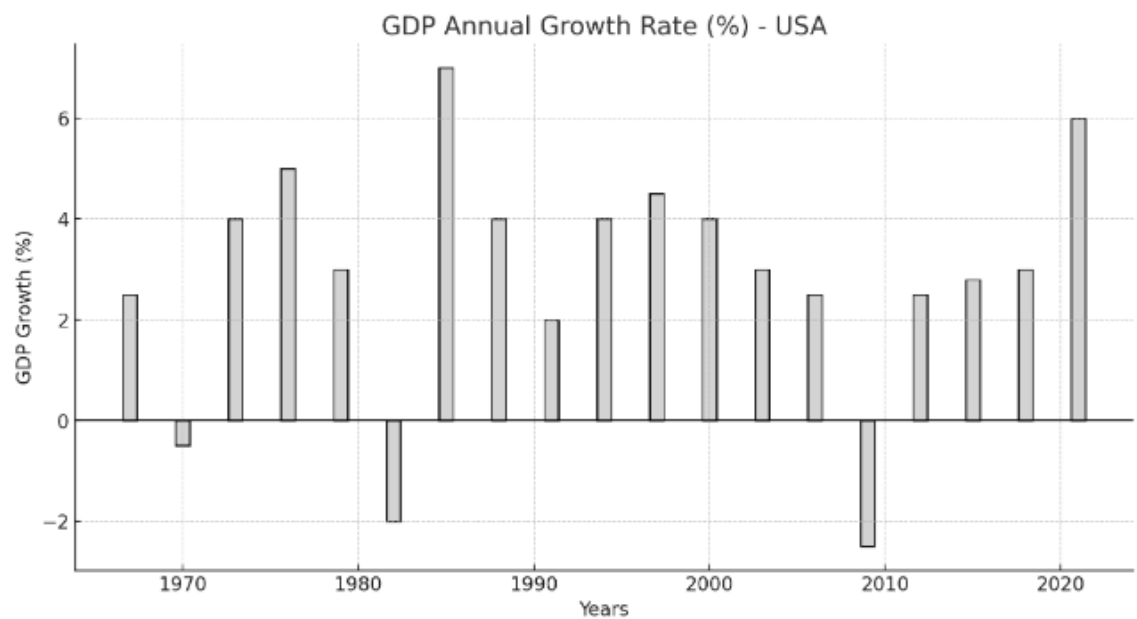


Figure 4. Visualizations of Jamaican, Kenyan, Nigerian, Japanese, and American GDP Percentages

Sources: University of Oklahoma World Dataset (Demographic Variables) and World Bank, World Development Indicators (GDP Data)

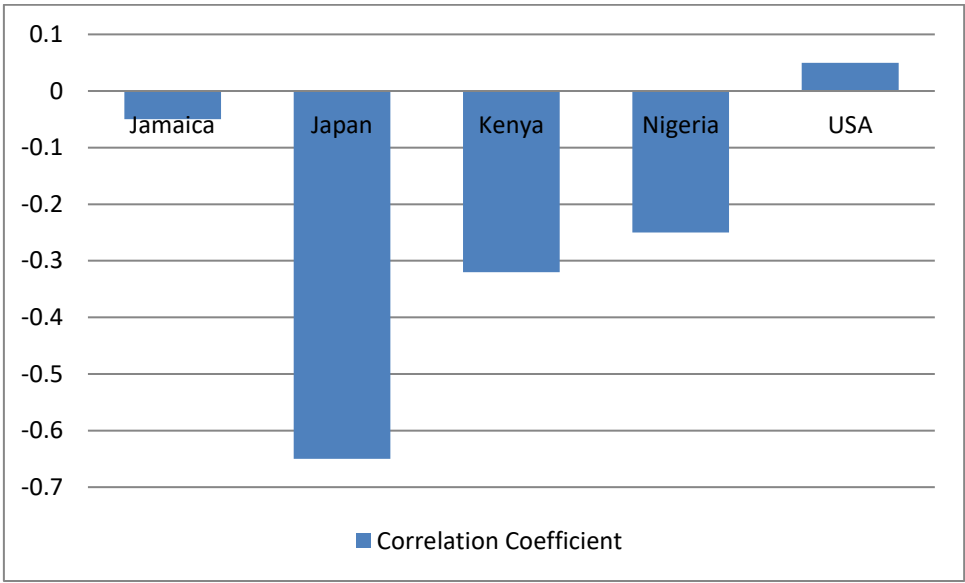


Figure 5. Coefficient of Correlation between Life Expectancy and Annual Percent GDP

Sources: University of Oklahoma World Dataset (Demographic Variables) and World Bank, World Development Indicators (GDP Data)

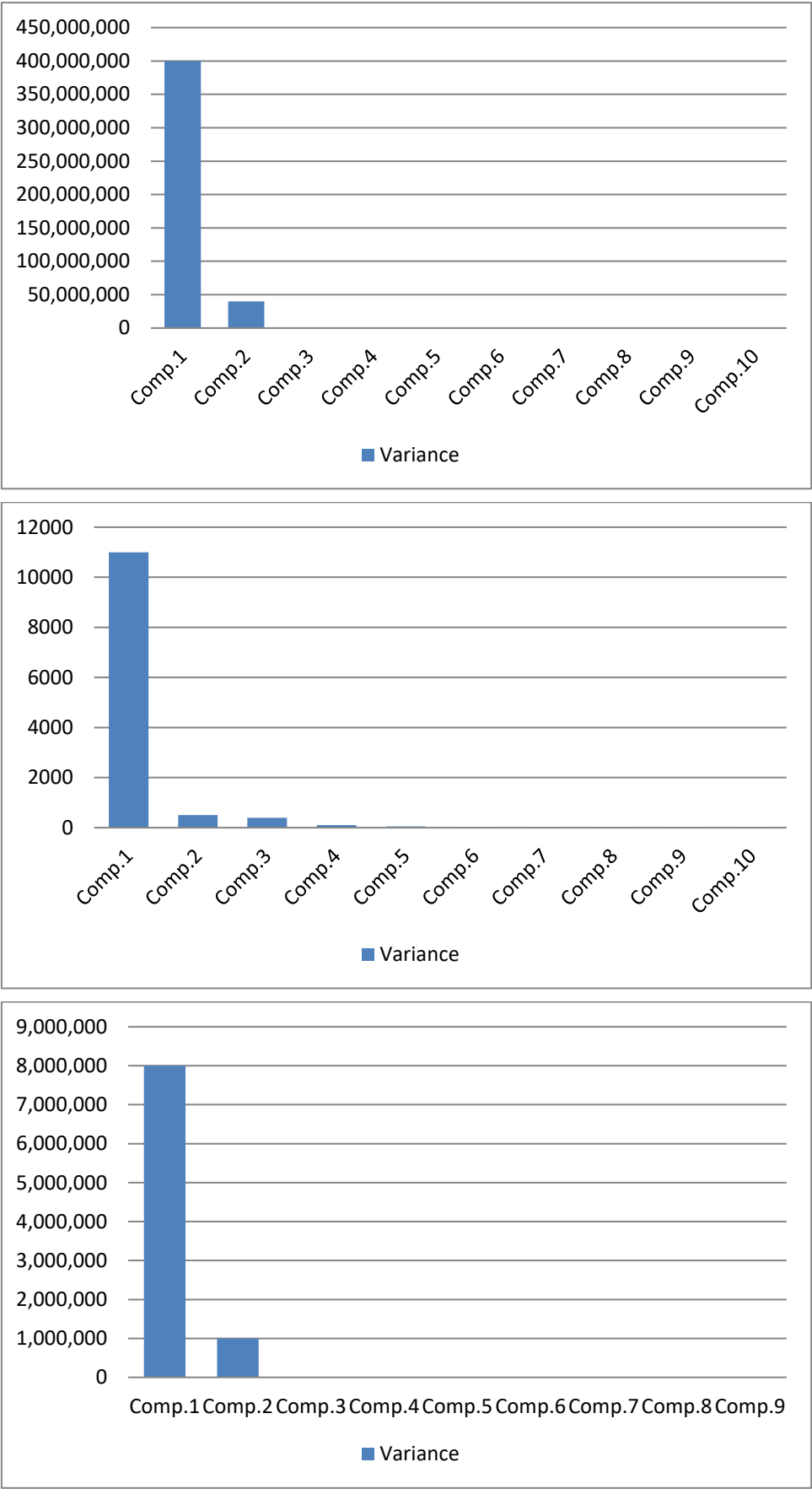


Figure 6. PCANIGERIA, PCAJAM, PCAJAP



Sources: University of Oklahoma World Dataset (Demographic Variables) and World Bank, World Development Indicators (GDP Data)

The Principal Components of the demographic variables that were used in the analysis of the different counties may be seen in the Scree Plots that came before them[19]. This category contains various demographic data, including but not limited to life expectancy, infant mortality, net migration, crude birth rate, total fertility rate, net reproductive rate, and other similar statistics. Plotting components against Eigenvalues is what the principal component analysis (PCA) does. This graph is based on the geological concept of sandstone, often known as rubble, that is located underneath a cliff wall.

The larger columns come together to form the cliff, while the shorter and flatter columns that are located closer to the base of the cliff are referred to as scree or debris[20]. The components that make up the cliff or the longer columns are kept intact during the Principal Components analysis. One Component should be retained by each of the following countries: the United States of America, Jamaica, Nigeria, and Japan, as shown by the accompanying screen plot. Two Kenyan and three German components should be retained [21]. This implies that the components for both Germany and Kenya are more variable, suggesting greater variation in how these factors interact with one another and with other variables, such as GDP. As a result, this suggests that the components for both countries. In the dendrograms shown below, you will be able to see the clusters of the several elements used in analyzing the demographic data for each nation. In addition, the periods and categories that are covered by these dendrograms are shown.

An example of this is the United States Dendrogram, which indicates that 1995 needs more research. This is only one example of the various dendrograms that can achieve this. One reason the group sizes in these dendrograms are important is that they illustrate hypothetical epochs in a nation's demographic history during which certain events may have occurred [22]. Considering the Dendrogram for Jamaica during 1970–1975, it is evident that the nation was actively embroiled in political violence throughout that decade, which may have affected the period's demography.

Given that the Kenyan Crisis of 2007–2008 received significant attention, it would seem that this period is also highlighted on the dendrogram. A further political crisis that led to the formation of a coalition government and the deaths of hundreds of people was brought about by this crisis[23]. These occurrences have the potential to affect a nation not just in terms of the number of lives that are lost, but also because of the political ramifications that may affect economic policies and the path that a country's economy takes, which can ultimately result in substantial changes that can eventually lead to a decrease in national gross domestic product. Examining the demographic patterns of a nation in conjunction with its economic statistics is quite important[24]. If this occurs again, we will be able to make more accurate projections of the economy.

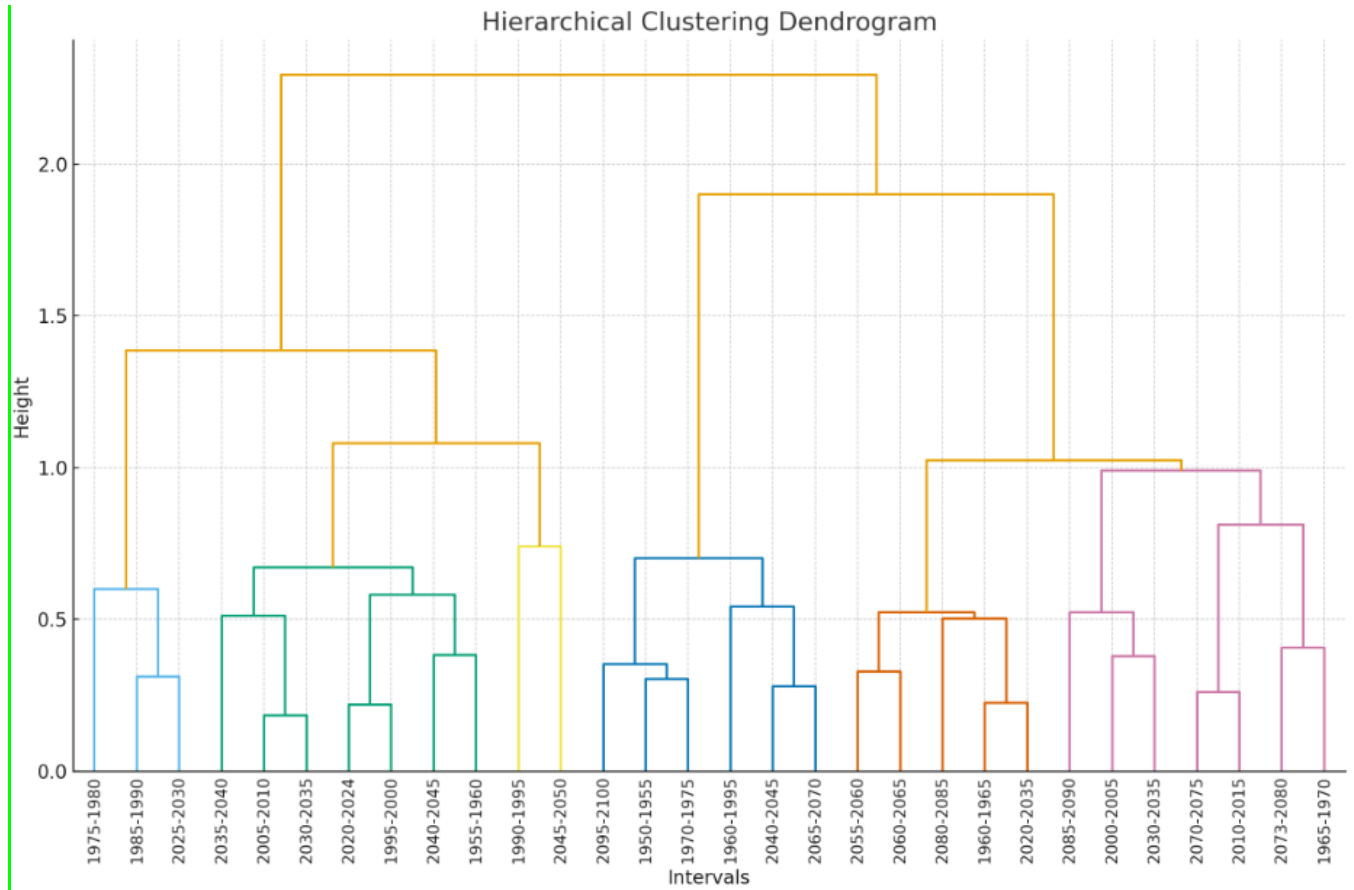


Figure 7. Distance JAM  
Hclust ("", "complete")

The DistanceJAM dendrogram shows how the complete linkage technique, which organises clusters by the most considerable distance between members, is applied to Jamaica's time intervals. This approach reveals prominent clusters since they are tiny and well-separated. Several short periods, particularly those spanning decades, merge at low altitudes in the picture, revealing significant similarities. Higher clustering coalesces wider and more distant intervals, indicating Jamaica's temporal data structure with time. The dendrogram reveals that the Jamaican dataset has a few strong short-term clusters, but the long-term intervals diverge, showing that patterns alter over decades.

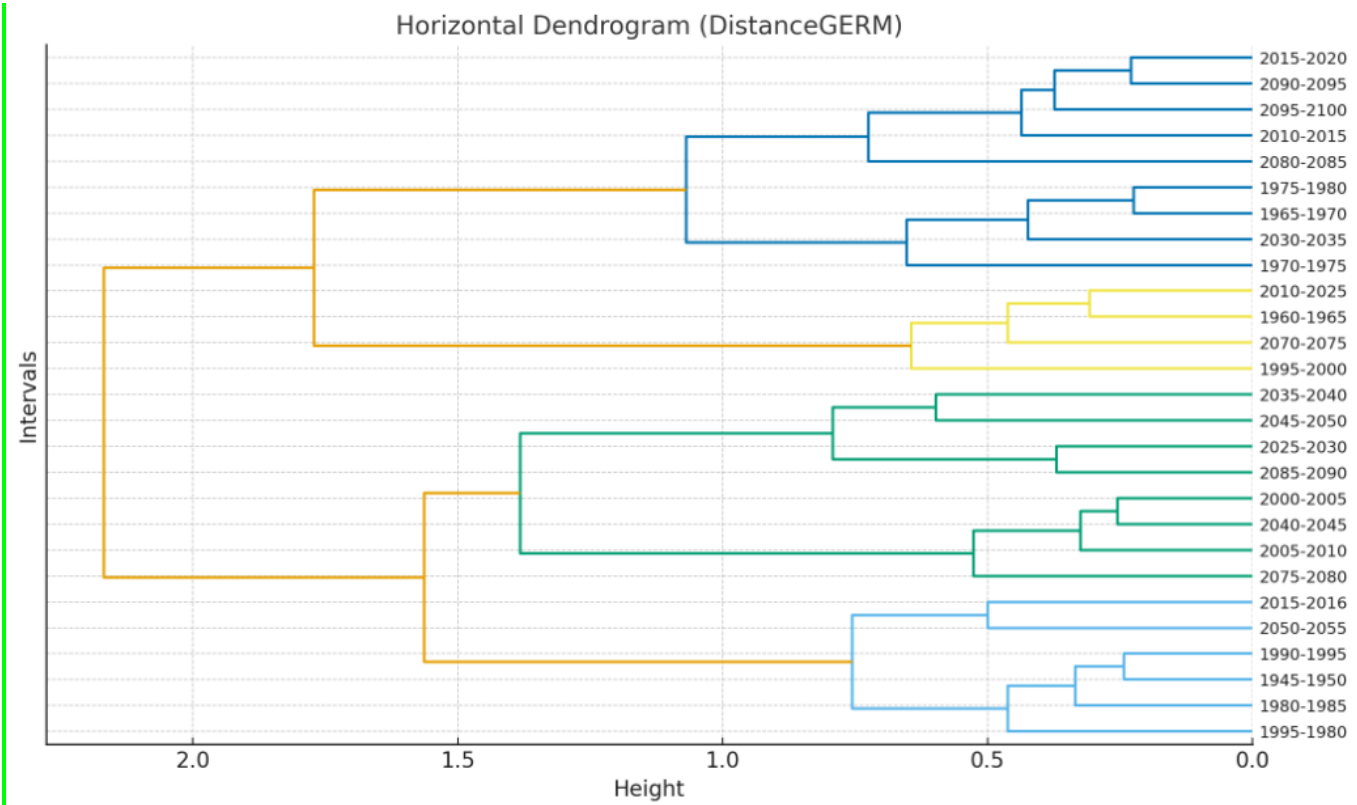


Figure 8. Distance GERM  
Hclust ("", "complete")

A dendrogram is shown here; it displays the way in which the various time periods are grouped based on the similarities between their patterns for Germany. The clustering begins by merging smaller intervals at lower heights, indicating that those periods have more similar properties. For instance, the intervals surrounding 1970–1985 and 2010–2025 exhibit rapid clustering, suggesting similarities between the two periods. The significant clusters that are created at greater connection distances (height values) indicate that there were wider swings in patterns over the course of the decades. This is seen by the grouping of the years 1945–1975 with 2070–2100, which reflects long-term changes. In general, the graphic draws attention to Germany's structural heterogeneity and the overall short-term connection.

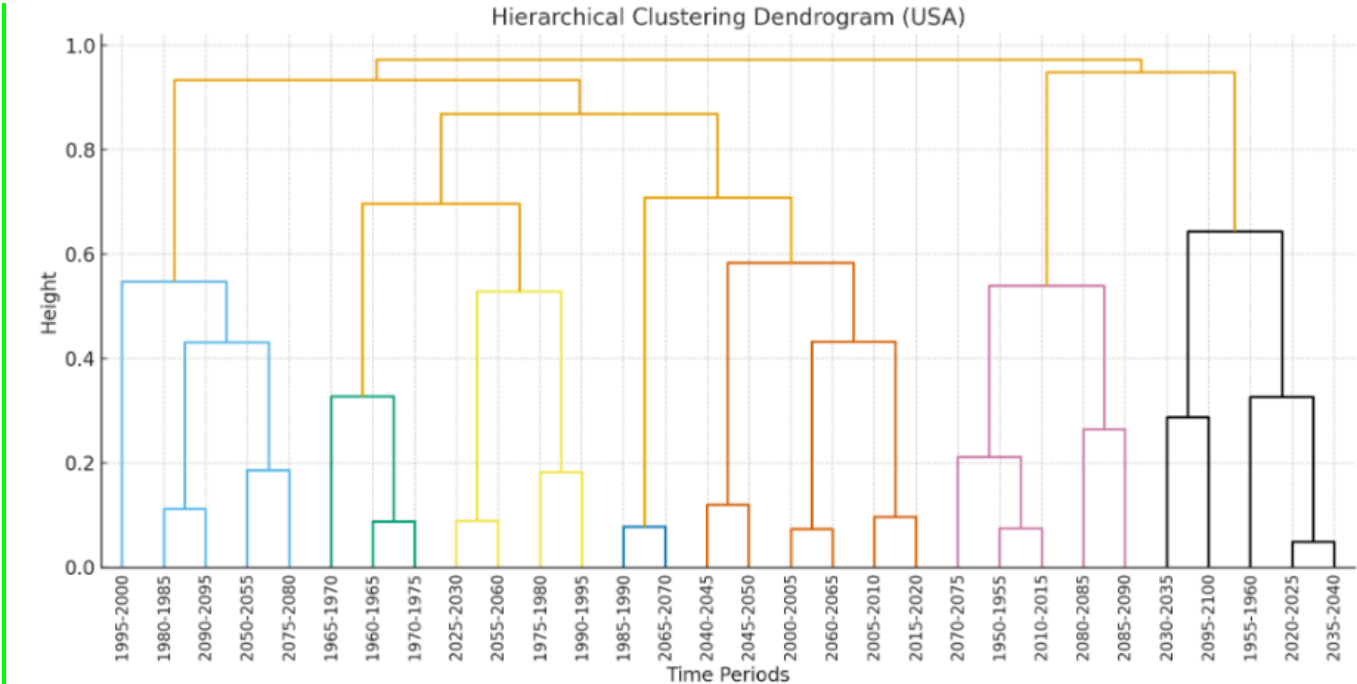


Figure 9. Distance USA  
Hclust ("", "complete")

The complete linkage distance dendrogram for the USA groups, time periods by dissimilarity. Unlike single linkage clustering, complete linkage clustering groups data by maximum distance, frequently creating looser, less compact clusters.

After 2000, clusters of intervals likely unify early on, and numerous shorter intervals combine at lower heights in the picture, suggesting considerable similarities within those periods. Bigger clusters form as height increases, linking decades with deeper structural or historical distinctions. U.S. temporal patterns are diverse across long periods because specific clusters only combine at higher heights. This dendrogram shows that while some short-term U.S. periods are very similar (tight compact clusters), the complete linkage method emphasises the separation across decades, showing how the dataset changes significantly over time and that only larger clusters connect the older and newer periods.

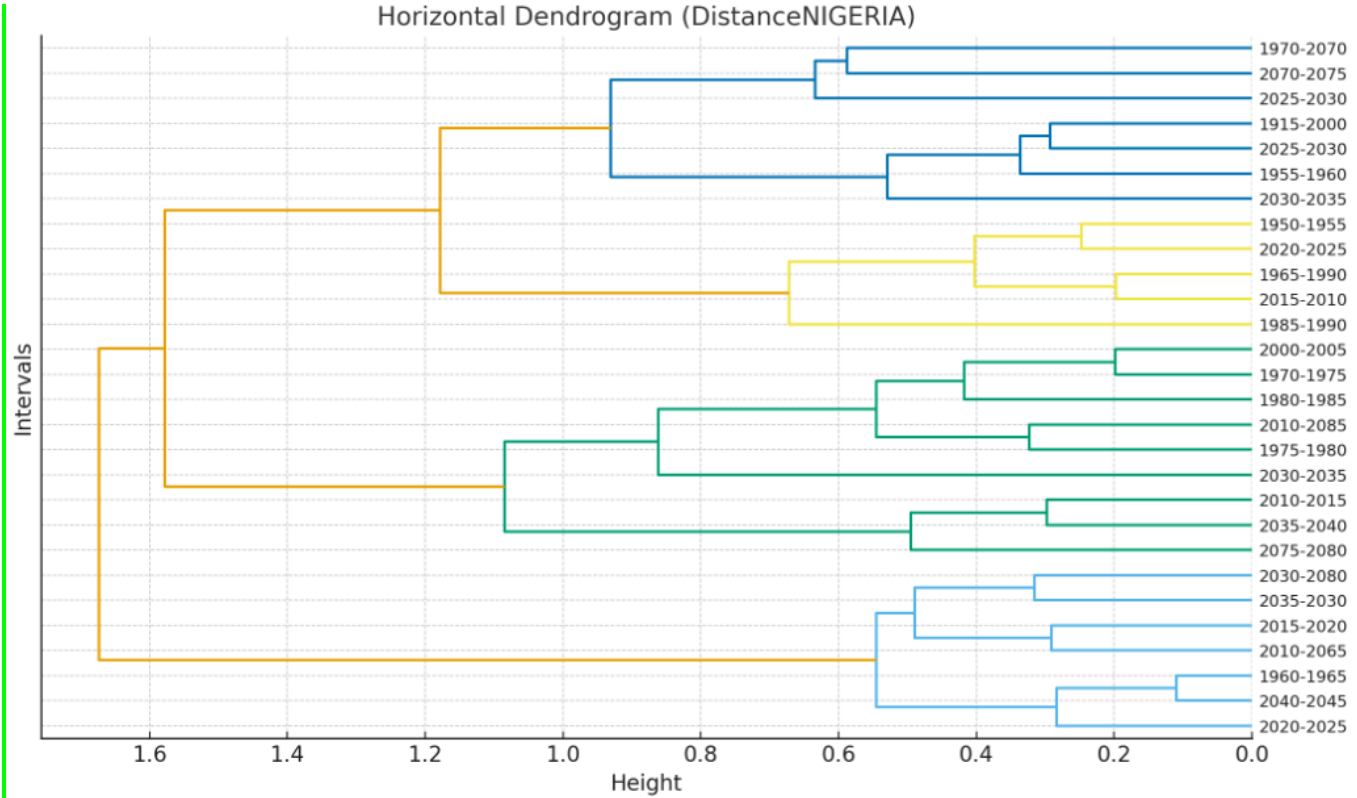


Figure 10. Distance NIGERIA  
Hclust ("", "complete")

The dendrogram for Nigeria shows greater dispersed clustering, with several intervals connecting at heights of intermediate length (0.6–1.0). This suggests that the parallels across different periods in Nigeria are less pronounced than those in Germany, implying greater variability over the decades. For example, the years 1950–1965 form a cluster before joining bigger groupings, whereas future intervals such as 2070–2080 and 2040–2050 form unique branches. The larger linkages at greater distances indicate that temporal data trends in Nigeria are more diverse. This is because there are fewer highly coherent sub-periods in Nigeria's temporal data trends than in Germany's.

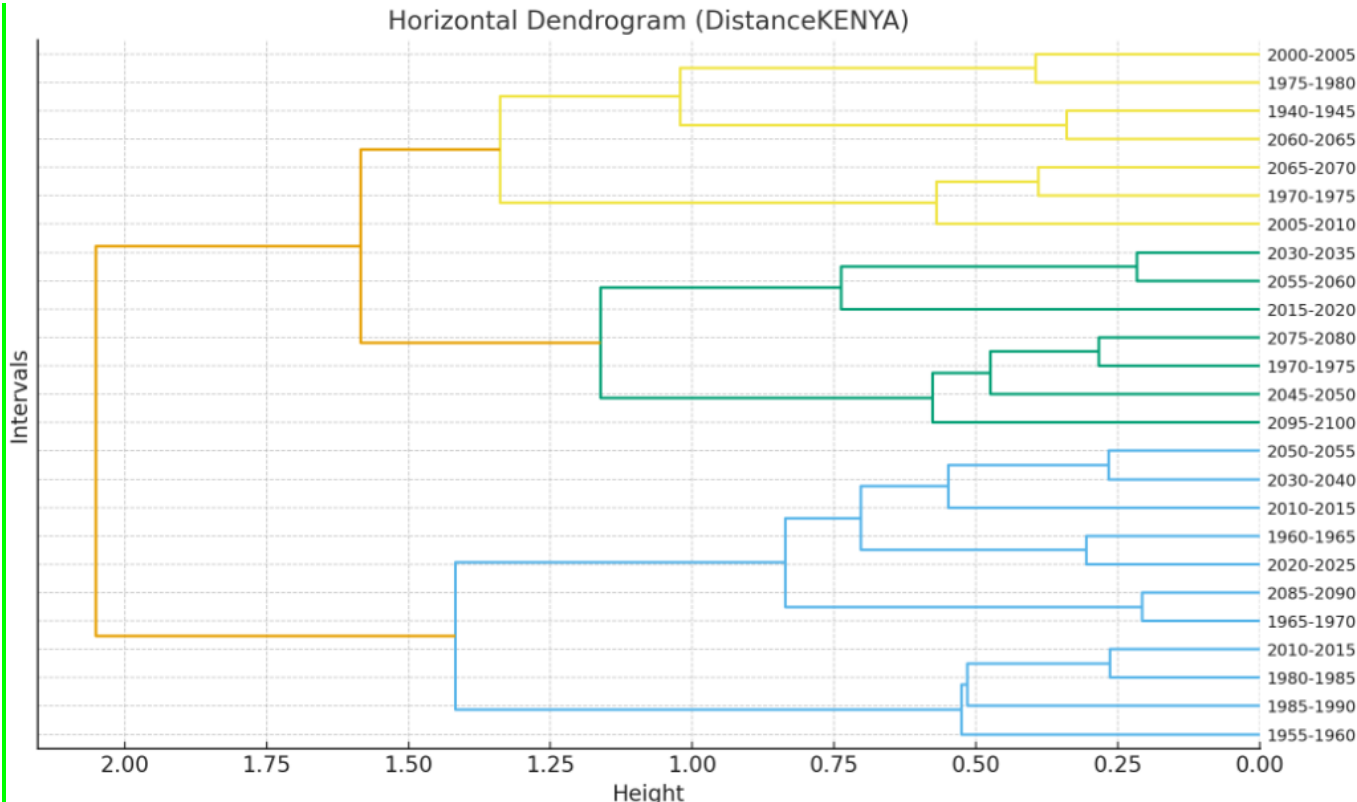


Figure 11. Distance KENYA  
Hclust ("", "complete")

Sources: Author’s analysis based on demographic data from the University of Oklahoma World Dataset and economic indicators from the World Bank (World Development Indicators)

Compared to other countries, the dendrogram for Kenya shows a stronger balance between tightly-knit clusters and larger groups. The early stages of intervals such as 2005–2010 and 2060–2065 are consolidated and exhibit a close resemblance during these times. The formation of mid-range clusters (for example, the periods 1965–1990 and 2010–2020) occurs at heights near the middle of the range. This is indicative of the fact that there are patterns that are persistent yet unique over different decades. Interestingly, earlier intervals, such as 1940–1975, ultimately blend with much later intervals (for example, 2095–2100) at higher elevations. This indicates that structural alignment has occurred over a long period and will continue to do so. This figure provides evidence that Kenya's dataset maintains both short-term continuity and long-term structural consistency, which is more balanced than the significant fluctuations seen in Nigeria.

## DISCUSSION

Systems such as Ayurveda, Persian medicine, and Chinese Traditional Medicine have long histories that span Asia, Africa, and Europe [25]. These systems are examples of healthcare knowledge passed down from generation to generation. Even though these systems influenced early health practices in the Global South, the North advanced more rapidly through industrialization and the establishment of healthcare institutions. The Bismarck insurance model and the Beveridge tax-based system are two examples of structured health finance systems that Europe has developed over many generations to guarantee that all of its residents have the financial means to pay for medical care. However, discrepancies in health access persist in many countries of the Global South, resulting from fragmented systems inherited from the administrations of colonized countries [26].

### Healthcare

Because of factors such as poverty, contagious diseases, insufficient housing, and social inequities, the Southern Hemisphere has been unable to make significant economic growth for a long time. The rise of the economy in nations such as South Africa, Brazil, India, and China has led to an increase in the availability of healthcare over time; yet, there are still issues that need to be addressed [27]. There are a significant number of underprivileged communities that are at risk of facing catastrophic health expenditures as a result of the lack of equitable healthcare coverage brought about by escalating out-of-pocket charges and dependence on assistance from individuals and organizations located outside of the country. Regarding healthy economies, varied tax bases, and modern healthcare systems, northern countries like the United States of America, Japan, and Germany are in a better position than southern nations [28]. The presence of these characteristics makes it feasible to achieve better health outcomes for the whole population. These variables also enable increased healthcare spending per individual and access to tertiary care and cutting-edge technologies.

### Epidemiological Transition

Traditional communicable diseases (such as HIV, tuberculosis, and malaria) coexist with the rising prevalence of non-communicable diseases (NCDs) in the Global South. These NCDs include diabetes, cardiovascular difficulties, and cancers. This results in a double burden of sickness. Similar trends were present in the North before the advent of industry; however, similar issues are also afflicting the South, and the resources available for healthcare are usually insufficient [29]. The most significant challenge facing the health care system in the Northern Hemisphere is the management of aging populations and chronic non-communicable illnesses (NCDs). As an example, South Americans may be confronted with catastrophic out-of-pocket expenses as a result of insufficient insurance and a lack of institutional support. On the other hand, Japan's aging population is pushing for increasing spending on end-of-life care and dementia treatment.

### Health Financing

Additionally, there is a wide range of approaches to health financing. In the Northern Hemisphere, universal health care is supported by a combination of systemic government financing, risk-sharing insurance, and taxation. There are, however, still gaps in treatment and unequal access in the Global South. This is because the region depends on foreign aid and has limited local health care financing. By implementing ambitious plans to expand universal healthcare coverage, nations such as China, Japan, South Korea, Taiwan, and Singapore have made strides in improving access to healthcare. On the other hand, many countries in South Asia and Sub-Saharan Africa face challenges such as low levels of government investment, high out-of-pocket costs, and programs that depend on individual donors.

The aging of the population and the decline in childbearing rates contribute to problems in certain areas. There is significant strain on healthcare and social security systems in industrialized countries due to the high number of retirees [30]. At the same time that industrialization and urban migration are accelerating aging trends in the Global South, particularly in China, traditional family structures are collapsing, contributing to a decline in family-based care for the elderly, as stated by Jakovljevic et al. (2024). The North can cope with these strains due to institutionalized care and insurance availability. However, the South faces limited resources, disparities between rural and urban areas, and high healthcare costs for non-communicable illnesses and for secondary and tertiary care.

### An Analysis of the Global North and South

In this section, we will compare and contrast the development of countries in the North and South based on various

variables, including productivity, population growth and dependency burdens, agricultural production, exports, and international relations.

### **Levels Of Productivity**

Countries in the Global South have low living standards and low levels of human development. One characteristic that sets countries in the Global South apart from those in the Global North is their very low labor productivity — also known as production per worker — compared to those in the Global North. The concept of a production function, which systematically relates outputs to various combinations of component inputs for a given technology [31], is often used by societies to meet their material requirements. However, countries in the Global South rarely have the technical engineering concept of a production function supplemented with a more comprehensive conceptualization that incorporates, among other things, competent management, information accessibility, worker motivation, and institutional flexibility. This is because Global South countries are characterized by their lack of access to information. According to Strauss and Thomas (1988), low worker productivity may result from a combination of mental and physical fatigue stemming from the demands of competitive labor [32]. According to Dasgupta and Ray (1987), a lack of productivity leads to a decrease in revenue, which, in turn, may reduce capacity and productivity.

### **Population Growth and Dependency Burdens**

The South was home to the bulk of the world's population in 2004, with slightly more than 6.4 billion people. Additionally, the North was home to a lesser fraction of the world's population. The North and the South continue to have birth and death rates that differ significantly. The birth rate is relatively high in the Southern Hemisphere, but somewhat lower in the Northern Hemisphere. Contrary to the Northern Hemisphere, where birth rates are closer to 15-20 per 1,000 people, the Southern Hemisphere has birth rates that range anywhere from 30 to 40 per 1,000 people.

Furthermore, in comparison to the North, the death rate per 1,000 persons in the Global South is much higher and occurs more often. There will be far-reaching consequences from the high birth rate in the global South [33]. Around 40% of individuals living in the Global South are children under the age of 15, whereas less than 20% of the population in North America is under 15. Compared to the North, the South's active workforce is responsible for providing for approximately twice as many children. Compared to the Southern Hemisphere, the Northern Hemisphere has a much higher proportion of the population aged 65 or older. Young people and the elderly are included among those considered financially dependent on others.

**Dependency burden:** This word refers to the concept that people are a drain on society's resources and, as a result, need special attention. Only a little less than a third of the people in the North are reliant on other people, in contrast to the fact that more than half of the people in the South depend on other people[34].

**Agricultural production:** According to Todaro (2006), the Southern Hemisphere is characterized by a disproportionately large number of rural workers. This is in contrast to the Northern Hemisphere, where a smaller fraction of the population works in rural areas —less than 27 percent —and where 58% of the workforce is employed in the agricultural industry, which is much higher than the 50% ratio seen in the Northern Hemisphere [35]. Agriculture contributes around 14% of the gross national product (GNI) of countries in the global South, while it only accounts for 3% of the GNI of countries in the North. Poor organization, a lack of physical and human capital, and rudimentary technology are all factors that contribute to the fact that people in countries in the Global South prioritize food, clothing, and shelter above all else, and that low incomes force them to focus on agricultural production. Todaro went on to say that these factors all contribute to the fact that people in these countries prioritize these things above all else[36].

### **Exports**

To this day, the majority of the world's poorest nations continue to get the bulk of their economic support from the export of agricultural products[37]. According to Uroh (1988), in 2000, exports from countries in the global South accounted for around 25 percent of total global trade.

### **International Relations**

Both the Northern and Southern Hemispheres depend on one another. In terms of strengths, the North and the South are pretty different, distinct locations [38]. The strength of the North is greater than that of the South. These

inequalities manifest themselves in the manner in which the North exercises control over international commerce and the accords that regulate it. Furthermore, they manifest themselves in the terms the North employs to transfer technology, foreign assistance, and private capital to the South. The Global South continues to face inferior living conditions, higher unemployment rates, and broader economic disparities compared to the North. This is because of the reasons stated above[39].

## CONCLUSION

Comparing the Northern and Southern Hemispheres reveals significant population, income, and health differences. Northern countries have higher life expectancies, better treatment for non-communicable diseases, and more advanced medical technologies. These nations have robust healthcare infrastructure, substantial health financing systems, and long-term economic prosperity. Economic vulnerabilities, healthcare system fragmentation, and colonialism's legacy have led to lower life expectancies, greater out-of-pocket expenditures, and a double burden of infectious and non-communicable illnesses in the Global South. Despite economic development improving healthcare access, developing countries in the South still face challenges such as an ageing population, healthcare inequities between urban and rural areas, and reliance on foreign assistance. Clustering nations and time periods by health and demographic characteristics in dendrogram research emphasises these discrepancies. Due to stability, continuous growth, and similar health results throughout decades, Northern nations cluster more densely. Dispersed and fragmented clusters in the Global South reveal structural problems, uneven development, and significant inequalities across time and space. These dendrogram patterns show that world health is improving unevenly. We must boost financing for everyone, make healthcare delivery more equal, and enhance economic and demographic planning to address these inequities. We can rectify these discrepancies and build a fair healthcare system this way. Instead of diverging, North-South dendrograms should converge and merge more.



### Conflicts of Interest

The authors have disclosed no conflicts of interest.

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