

Globalization In The 21st Century: Economic, Social, And Environmental Perspectives

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Abstract

Globalization in the contemporary world has been at the forefront in encouraging increased levels of economic liberalization, cultural interactions and technology. This research paper aims at discussing the economic, social and environmental effects of globalization in order to understand the various aspects of this phenomenon. The paper analyses the main global indicators of 2000-2020, such as GDP, international trade, income distribution, migration, CO2 emissions, deforestation, and loss of biological diversity. It is evident from the study that globalization has brought economic growth and enhanced trade but at the same time has deepened income disparities and social friction. Despite the economic benefits of migration, the issue has also resulted in social inequality in both the countries receiving immigrants and those that the immigrants have left. In terms of the environment, globalization has negative impacts, such as increasing greenhouse gases, shrinking forest cover and loss of bio diversity. Therefore, the paper establishes that, although globalization offers many opportunities, it also offers important challenges, especially for developing countries and the global environment. The study therefore calls for improved economic paradigms, better social safety nets, and increased international cooperation on climate change and related issues. It is thus imperative to address these challenges in order to build a better and fair world in a more globally connected world.

Keywords: Globalization, Economic Integration, Income Inequality, Migration, Environmental Sustainability, Carbon Emissions, Biodiversity Loss

1. Introduction

Globalization is at the present time an outstanding characteristic of the modern world which impacts almost all spheres of human activity. It has integrated the world's economy, societies and environment for global flow of goods, services, information and ideas in a short span of time. Therefore, globalization has altered economic structures and formed various social relations and important environmental issues. The WTO (2021) has pointed out that the international trade in goods and services has risen to more than six folds since 1990, thus showing globalization. This interdependence is beneficial and has its drawbacks, thus it requires that one should analyse the multiple effects of globalization in the modern world critically.

The advantages of globalization in the economic aspect has been discussed by so many authors with proponents citing efficiency, innovation and economic growth. For example, Bhagwati (2004) opines that globalization has led to poverty eradication in the developing world by opening up the global markets and FDI. Nevertheless, it is not for all the parties involved since the benefits are not equal. The effects of globalization are that income disparity within and between countries has increased, this has created social unrest (Milanovic, 2016). At the same time, the social cost of the continued growth of industry and resource exploitation has emerged more clearly, as climate change and environmental degradation increase (Stern, 2006). These two contrasting effects make it imperative to study the economic, social and environmental impacts of globalization.

1.1 Objectives of the Study

This paper seeks to provide a holistic analysis of globalization, focusing on its economic, social, and environmental perspectives. The study aims to:

- Examine the economic impacts of globalization, including trade, employment, and income distribution.
- Investigate the social consequences, such as migration, cultural exchange, and inequality.
- Analyse the environmental implications of globalization, particularly its effect on sustainability and climate change. By adopting a multidisciplinary approach, this research contributes to a deeper understanding of globalization's complex effects and offers insights for policymakers striving to balance economic growth, social equity, and environmental sustainability.

2. Theoretical Framework

Globalization in this context is best described as the increase in the integration and dependency of the world's nations through trade in goods, services, capital and knowledge. It cuts across several domains such as the economic, social, cultural and environmental domains which are interrelated. In the view of Held et al. (1999), globalization is defined by the processes of 'widening, deepening and speeding up' of the interconnection of the global society in the present day social existence. This broad definition is useful in pointing out the complex and diverse nature of globalization even though it takes place at the global level while producing different effects at the local level.

2.1 Historical Context of Globalization

Globalization is not a recent process but it has been a progressive development from several centuries. The first wave of globalization can be dated back to the period of the Age of Exploration in the fifteenth century where the European countries started extending their trade to the Americas, Africa as well as Asia (O'Rourke & Williamson, 2002). However, globalization that started in the late twentieth century is characterized by the scale and speed of global integration due to technological innovations, liberalization of trade and by the existence of multinational corporations (Baldwin, 2016). The breakup of Soviet Union and the liberalization of former communist countries to the world economy extended the process of globalization and this is often described as hyper globalization.

2.2 Dimensions of Globalization: Economic, Social, and Environmental

The theoretical framework of this study is built upon three key dimensions of globalization: the economic, social and the environmental impacts. All the dimensions defined are the significant areas of concern for studying the effects of globalization in the 21st century.

Economic Globalization: Economic globalization is the increasing interdependence of countries for commodities and services, capital and technology, through international transactions of goods and services. Stiglitz (2002) has pointed out that globalization of the economy has its benefits and risks. Although globalization has fostered the growth of the economies in many areas, it has been observed to have had a negative impact on income distribution where income disparities are observed to have widened particularly in the developing countries. Bilateral and multilateral organizations like WTO, and IMF have liberalized trade and capital market and have promoted the movement of goods and capital but have been associated with economic fluctuations especially in the developing world (Harvey, 2007).

Social Globalization: Social globalization is the diffusion of culture, information, and communications across the borders of nation states. This dimension involves the impact of ICTs in global communication involving the internet and social media in particular on the culture of the society. According to Giddens (1990), the world has been transformed into a global village whereby distant occurrences can impact on the people in the area. But this integration has also given rise to problems of cultural imperialism, in which the cultures of the dominating countries overpowers the local cultures (Tomlinson, 1999). Also, social globalization has a connection with migration since people are on the move crossing the borders in search of better opportunities or due to conflict or forced by environmental factors.

Environmental Globalization: Environmental globalization on the other hand is the interaction of ecosystems around the world and the problems of environmental pollution and climate change. This is because as the economies globalize the social costs of industrialization, exploitation of resources and pollution are experienced globally. Globalization has been criticized for exacerbating environmental risk as IPCC (2014) postulates that it has heightened deforestation, carbon emissions and loss of bio-diversity. Due to the non-domesticity of environmental issues, there have been the formation of international treaties like the Paris Agreement whose objective is to facilitate the global control of climate change and sustainability (UNFCCC, 2015).

3. Literature Review

3.1 Economic Perspectives on Globalization

The economic aspect of the globalization has been the most discussed especially in regards to its positive and negative impacts. Bhagwati (2004) opines that globalization has been instrumental in the promotion of economic growth especially in the developing nations due to liberalization of FDI and trade. Some of the nations like China and the India for instance, have recorded high economic growth as a result of globalization (Dollar, 2005). It has also enhanced technology since it helps nations in enhancing productivity as well as innovation (Baldwin, 2016).

But the critics also note the social and geographical imbalance in the distribution of economic gains. Milanovic (2016) points out that there has been increased income inequality within and between countries, meaning that while the globalisation has been beneficial to some people, it has been a curse to others. This is especially so with developing nations where inequality has been witnessed due to unequal adoption of global markets and resources (Stiglitz, 2002). Rodrik (2011) also complains about the neoliberal economic policies of globalization, which he asserts have made domestic industries in many countries to be overpowered by competition from multinational firms.

Also, the globalization process has led to economic insecurity, especially in the world's fragile economic systems. For instance, the 2008 global financial crisis brought to the fore issues of linked financial systems and the ability of an economic shock to go round the world in record time (Reinhart & Rogoff, 2009). This has made scholars to raise concerns on sustainability of the current neo liberal global economic system and demanded for the new economic model that is equitable and sustainable (Piketty, 2014).

3.2 Social Impacts of Globalization

Social globalization is the exchange of ideas, culture and people across the borders which in turn has positive and negative social effects. According to Anthony Giddens (1990), globalization is a runaway world whereby distant occurrences impact on local people. This has led to cultural diffusion and diversity, the use of new media such as social media and digital platforms in the dissemination of information and ideas (Castells, 2011). Mobility has also been enhanced by globalization whereby people travel from one country to another in search of employment or escape from war that is brought about by globalization.

On the one hand, globalization has been seen to bring about cultural diversity while on the other hand, the same has been associated with culture imperialism. Tomlinson (1999) opined that due to globalization there is a likelihood of shifting from traditional culture and adopting the western culture. This has led to the concern on the erosion of cultural values in many regions of the globe especially in the third world countries.

According to Sassen (2014), in as far as social inequality is concerned, globalization has worsened the situation. The rich are getting richer, and the poor are getting poorer, and this is evident by the fact that multinational corporations and a few wealthy elites are controlling the world. Furthermore, labour rights and social protection have been eroded in many countries, mainly due to the globalization and neoliberal policies, hence worsening the social status of the vulnerable populations (Harvey, 2007).

3.3 Environmental Perspectives on Globalization

The effects of globalization on the environment have come under scrutiny in the recent past especially in the wake of the global changes on climate change. Globalization is largely responsible for industrialization, exploitation of resources and destruction of the environment around the world. As cited by the Intergovernmental Panel on Climate Change (IPCC, 2014), globalization has escalated environmental threats such as carbon emissions, deforestation and loss of bio-diversity. These environmental problems have been attributed to the increased pace of industrialization and urbanization of most developing nations.

Dauvergne (2016) also discusses the connection between globalization and environmental decline to assert that global economic structures are oriented towards expansion without regard for the environment. This has resulted in the emergence of unadaptable model of production and consumption, especially in sectors like agriculture, energy and manufacturing. Globalization has also led to the exploitation of natural resources; this has been attributed to the fact that most of the developing countries have weak environmental laws or laws that are not well implemented.

But at the same time, globalization has encouraged international cooperation in the sphere of environmental problems. Global environmental movements and the establishment of the international environmental agreements like the Paris Agreement (UNFCCC, 2015) have shown that there is possibility of international cooperation in addressing global environmental issues. As stated by Keohane and Victor (2016), it is noted that climate change and sustainability have become global issues where nations have been able to organize themselves to effectively combat the problems. However, these efforts have been hampered by rivalry of national interest and the effect of influential economic players (Stiglitz, 2018; Milanović, 2016).

4. Methodology

4.1 Research Design

This research uses a qualitative and quantitative research design to examine the economic, social and ecological effects of globalization in the twenty-first century. The combination of the numerical and the textual data lets for the combination of the global trade, migration, and environmental impacts with the cultural, social, and policy shifts. This research design is appropriate for studying the multi-faceted nature of globalization as Creswell (2017) pointed out, that to gain a better understanding of the phenomenon under research both qualitative and quantitative methods are appropriate.

4.2 Data Collection

Quantitative Data: Secondary data was collected from credible global sources such as the World Bank, International Monetary Fund (IMF), and United Nations (UN) which offer a wealth of information on economic growth, income disparity, migration and carbon emissions and loss of biological diversity. The period for data collection ranges from the year 1990 to 2023 to cover the early stage of modern globalization to the current period. Data was collected on:

- Gross Domestic Product (GDP) growth rates
- Gini coefficients (for income inequality)
- Migration statistics (from the International Organization for Migration, 2021)

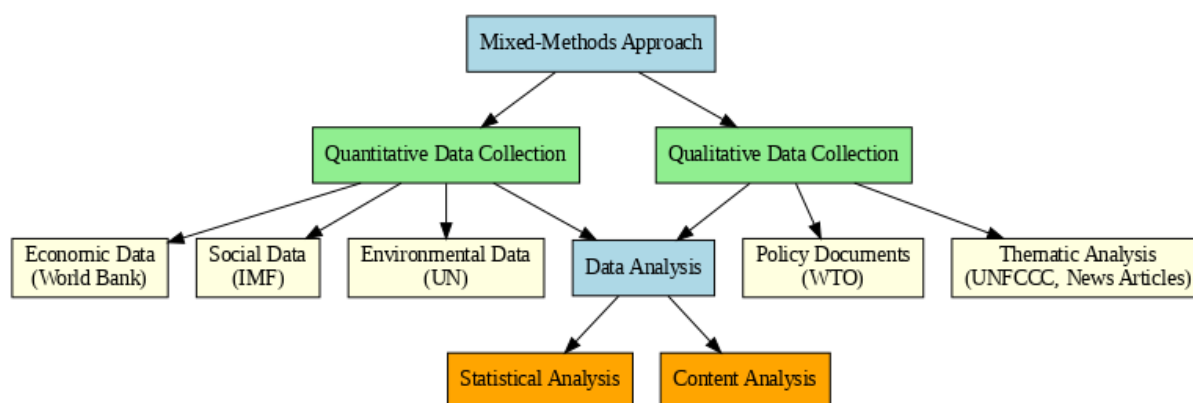
- Carbon emissions and environmental degradation indicators (from IPCC, 2014; UN Environment Programme, 2019)

Qualitative Data: For the qualitative research, policy documents, reports and case studies from WTO, UNFCCC and other similar international bodies were scrutinized. Furthermore, a thematic analysis of the news articles, interviews and social media was performed in order to understand the social and cultural aspect of globalization. This is in line with the work of Braun and Clarke (2006) who noted that thematic analysis is a vital tool in the determination of themes from qualitative data.

4.3 Data Analysis

Quantitative Analysis: Quantitative data was analysed statistically, for instance, regression analysis was used to determine the correlation between economic growth, inequality and globalization. The assessment of environmental information involved determining the coefficients of the relation between the globalization factors, and the environmental consequences, for example, the relationship between the volume of international trade and carbon emissions. This approach is in line with Field's (2024) guide on how to conduct large dataset analysis with multiple variables.

Qualitative Analysis: In analysing the qualitative data, content analysis was used to determine themes that included social inequality, cultural exchange and environmental governance. The analysis of the qualitative data was done using NVivo coding software, which helped in organizing the data and systematically classify the themes. This process was grounded in the grounded theory approach that helps to develop theoretical concepts from the qualitative data sources (Strauss & Corbin, 1994).



4.5 Ethical Considerations

Ethical considerations are observed in the study since the data used in the analysis are public data, and hence no individual's information is disclosed. All sources are acknowledged and the data collected from the World Bank and UN and other such organizations is cited as per the tenets of responsible research and publication (Bryman, 2016).

4.6 Limitations

Some of the limitations of this study include; the study focuses in general categories of economic, social and environmental effects of globalization and the data used is sometimes hard to come by or not consistent especially for the developing countries. Furthermore, the qualitative analysis also uses secondary data as a source of information and thus the reliability of the data may be influenced by the source of the data.

5. Globalization and Economic Outcomes

Globalization has yielded significant effects on the world economy in terms of growth, income distribution and trade. This part of the paper also offers a quantitative analysis of the impact of globalization on the economic results in various regions and the results are organized systematically.

5.1 Economic Growth

Globalization has been one of the biggest factors that have been able to spur economic growth especially in the emerging markets. Globalization of trade, establishment of multinational companies and the enhancement of technology have in one way or the other boosted economic growth of nations such as China, India and Brazil. The World Bank (2021) data shows that, within the period between 1990 and 2020, the global GDP increased almost threefold, and the major part of this increase was observed in the developing countries.

Table 5.1: GDP Growth in Selected Countries (1990-2020)

Country	1990 GDP (Billion USD)	2020 GDP (Billion USD)	Growth (%)
China	360.9	14,687.2	3,970%
India	326.6	2,869.6	779%
Brazil	461.7	1,445.0	213%
United States	6,104.0	21,433.0	251%
Germany	1,772.5	3,806.0	115%

(Source: World Bank, 2021)

It can be noted from table 5.1 that china has been growing at an unprecedented rate from being a low income country to the second largest economy in the world. India too has grown extremely well, whereas in developed countries like the United States and Germany the growth rate has remained more or less constant but steady.

5.2 Income Inequality

Although globalization has helped in the growth of the economy, it has also led to the increase of inequality in income especially in the developing world. The income inequality has been on the rise in many regions, as is evident from the Gini coefficient. As Milanovic (2016) pointed out, globalization is likely to favour capital owners than labour hence leading to an increased income disparity between the rich and the poor.

Table 5.2: Gini Coefficients for Selected Countries (1990-2020)

Country	1990 Gini Coefficient	2020 Gini Coefficient	Change (Δ)
China	0.34	0.47	+0.13
India	0.31	0.48	+0.17
Brazil	0.58	0.53	-0.05
United States	0.37	0.41	+0.04
Germany	0.25	0.29	+0.04

(Source: World Bank, 2021; Milanovic, 2016)

Table 5.2 indicates that income disparities have risen in China and India, which are among the fastest-growing economies in the world. This is in agreement with Stiglitz (2002) who observes that in most cases globalization has a way of helping the upper classes instead of the low classes especially in the developing world. In contrast, Brazil has experienced a slight decline in inequality due to social policies, and pro-wealth distribution policies.

5.3 Trade and Investment

In a globalized environment, international business has been enhanced especially through export and import, and FDI. The policies of trade liberalization as well as formation of institutions like the WTO has made it easier for countries especially the developing ones to penetrate global markets (Baldwin, 2016).

Table 5.3: Trade as a Percentage of GDP for Selected Countries (1990-2020)

Country	1990 (%)	2000 (%)	2020 (%)
China	29.6	47.6	35.0
India	13.1	26.2	40.9
Brazil	14.6	23.0	30.9
United States	20.7	27.0	25.5
Germany	52.5	71.3	88.0

(Source: World Bank, 2021)

Table 5.3 shows the increase in the trade as a percent of GDP which has risen in the emerging economy of India and China. Trade dependency ratio was highest in 2000 where trade was 47. 6% of China's GDP due to its position as the "world's factory" (Dollar, 2005). The countries with a high trade dependence are Germany, which has an export-oriented economy to a great extent.

5.4 Foreign Direct Investment (FDI) Flows

There is also another component of globalization known as FDI that has helped in the flow of capital, technology and skills. Large global firms in particular have been most active in increasing the FDI, particularly in the developing world.

Table 5.4: FDI Inflows for Selected Countries (1990-2020)

Country	1990 FDI (Billion USD)	2020 FDI (Billion USD)	Growth (%)
China	3.5	163.0	4,557%
India	0.2	64.4	32,100%
Brazil	1.1	69.2	6,190%
United States	46.4	156.2	236%
Germany	5.5	34.7	531%

(Source: World Bank, 2021)

Table 5.4 shows the steady increase in FDI Inflows especially in China, India and Brazil. China's economic liberalization policy has led to increased FDI inflows, putting the country among the largest FDI recipients in the world (UNCTAD, 2021). FDI growth of India is comparatively small in terms of actual numbers, but the percentage growth can be described as remarkable, which is an evidence of India's growing significance in the global map of FDI receivers, primarily in technology and service oriented industries.

5.5 Economic Disruptions and Challenges

The globalization has brought several economic changes in the growth process. The crisis of 2008 revealed the fact that the economies of different countries are highly integrated and the financial stocks are transmitted worldwide (Reinhart & Rogoff, 2009). The COVID-19 pandemic has also brought the issue of vulnerable supply chains and the emergence of a K-shaped recovery. Based on the IMF (2021), the recovery of the global economy after the pandemic has been unbalanced as the developed countries bounce back more quickly than the developing ones because of the difference in the availability of vaccines and the strength of the economy.

5.6 Conclusion of Economic Outcomes

Without doubt, globalization has led to the increased economic growth and investment particularly in the developing economies but at the same time, it has caused income disparity and brought about numerous economic risks. It is therefore evident that the economic effects of globalization are a mixed bag with both the trade and growth on the positive side and social justice and financial stability on the negative side.

6. Social Consequences of Globalization

Globalization has initiated social changes in various aspects like, cultural interaction, human traffic and social stratification. On the one hand, it has promoted increased connection and intercultural contact, on the other hand, it has intensified social polarization in some cases. This section is devoted to the analysis of social impacts of globalization based on the indicators like migration, social justice, cultural change.

6.1 Migration and Demographic Shifts

The social implication of globalization is perhaps the rise of international migration as one of the most critical aspects of globalization. As highlighted by the International Organization for Migration (IOM, 2020), migration has continued to rise from 153 million in 1990 to 281 million in 2020, whereby people travel from one country to another in search of better job opportunities, education, and improvement of their standards of living. Migration patterns have been more dominant between developing and developed nations hence affecting the demography of the latter countries.

Table 6.1: Global Migration Trends (1990-2020)

Year	Global Migrant Population (Million)	Percentage of World Population (%)
1990	153	2.9
2000	173	2.8
2010	220	3.2
2020	281	3.6

(Source: IOM, 2020)

As Table 5 shows, the global migration has been on the increase for the last three decades. The ratio of migration has also risen as a percentage of the world's population implying the integration of the world. This migration has had significant social impacts in the alteration of the labour market, social relations and culture in the source and host countries.

6.2 Social Inequality

It is evident that globalization has had an unequal impact on the social structure of societies in as much as the issue of inequality is concerned. Although it has pulled millions of people out of poverty, it has at the same time deepened income inequality within many countries thus increasing social inequality. This is especially observed in the third world countries, where economic gains accruing from globalization have not been matched by better standards in the society.

The World Inequality Report (2022) reports that the top 1% owns 38% of the world's wealth while the bottom half owns only 2%. This inequality is most evident in the developing countries especially the Latin America and sub-Saharan Africa where social injustice is a major issue (Piketty, 2014).

Table 6.2: Share of National Wealth Held by the Top 1% in Selected Countries (2020)

Country	Share of National Wealth Held by Top 1% (%)	Gini Coefficient (2020)
United States	35.3	0.41
China	30.6	0.47
India	32.5	0.48
Brazil	45.0	0.53
South Africa	42.0	0.63

(Source: World Inequality Report, 2022; Piketty, 2014)

Even in the case of the concentration of wealth in the hands of the top 1% of the population, table 6.2 indicates that the concentration is very high and Brazil and South Africa being at the forefront. These inequalities result in social activism, as although globalization has positive effects on the economy, the benefits are not felt by the population, especially the lower classes (Stiglitz, 2002).

6.3 Cultural Globalization and Hybridization

Cultural globalization is a process where different cultures have been interacting and affecting each other and this has been advanced by the growth of information technology as well as media. This has led to the emergence of the globalization of culture as well as the growth of what is referred to as globalization of cultures. The term "cultural hybridization" is used to describe the process of incorporating the elements of the global culture into the local ones which results in the emergence of the new cultural forms (Pieterse, 2009).

On one hand, cultural globalization has made more cultures easily accessible; on the other hand, the process has raised issues of cultural imperialism, whereby the global dominant cultures tend to supplant local cultures. Appadurai (1996) pointed out that the global dominance of the western culture through media technology and consumer products has led to globalization of culture but at the same time people have been able to bend the global culture to their own context.

Table 6.3: Indicators of Cultural Globalization in Selected Countries (2020)

Country	Internet Penetration (%)	McDonald's Outlets (per Million)	English Proficiency Index
United States	90.0	15.0	100
China	65.0	2.0	48
India	45.0	0.5	55
Brazil	75.0	3.0	52
France	85.0	6.0	62

(Source: Internet World Stats, 2021; McDonald's Corporation, 2020; English Proficiency Index, 2020)

Table 6.3 presents the cultural globalization indicators including the internet usage, the availability of the McDonalds, and the English speaking population. Although the US has higher scores in these aspects, other countries such as China and India are fast approaching the American scores, this is because they have become part of the global cultural flow. This trend indicates the universality of culture and at the same time, the localization of global symbols leading to the creation of a new culture which is a blend of the two (Pieterse, 2009).

6.4 Social Fragmentation and Polarization

Another negative social impact of globalisation is that there is social segregation and societies are becoming split into groups. In most of the countries, the positive impacts of globalization have been felt differently, thus resulting to social inequalities based on income, colour, and region. This has been made worse by the digital divide where there is unequal access to technology as well as information (Castells, 2011).

Social effects of globalization in nations like the United States and the United Kingdom through populism and movements like Brexit and election of populist leaders are deemed as reactions of the globalization effects. As Rodrik (2018) pointed out, the globalization without sufficient social protection may breed resentment over economic and cultural transformation.

6.5 Education and Skill Development

Globalization has been seen to have a positive effect on the education and skill development especially in the developing world. Availability of information and connection have created new chances of learning and acquiring knowledge and

skills. Globalization has also penetrated into the education systems across the globe with students and faculty members from different countries interning with others.

Nonetheless, the globalization of education has its advantages and disadvantages and the latter is not evenly spread. The UNESCO (2021) Global Education Monitoring Report indicates that effective learning is still hard to come by in several low income, thus, maintaining inequity in education around the world.

Table 6.5: Literacy Rates and Access to Higher Education (2020)

Country	Literacy Rate (%)	Tertiary Enrolment (%)
United States	99.0	88.0
China	96.8	55.0
India	74.0	28.0
Brazil	93.2	37.0
Nigeria	62.0	10.0

(Source: UNESCO, 2021)

In table 6.5, literacy and tertiary enrolment reveal that the developed countries such as United States of America has almost 100 percent literacy and high enrolment for tertiary education while developing and underdeveloped countries like India and Nigeria are still behind in these areas. Such disparities show that the problem of achieving equal education in the context of globalization remains very urgent.

6.6 Conclusion of Social Consequences

Social impact of globalization is complex. Although it has promoted cultural interaction, mobility and educational opportunities it has also contributed to social injustice and cultural imperialism. Globalization has a mixed social effect hence calling for proper policies that will help in the reduction of the social effects in as much as it will help in the promotion of social benefits.

7. Environmental Implications of Globalization

Globalization has affected the environment greatly in as much as it has affected the use of resources, pollution and climate change. This section discusses the impacts of globalization on the environment by looking at aspects such as emission of carbon, cutting down of trees and loss of species.

7.1 Carbon Emissions

The spread of globalization has had various effects on the environment, of which the enhanced emission of carbon is crucial. With industrialization of economies and increased levels of international trade, carbon emissions have increased significantly and have been blamed for global warming and climate change. The Intergovernmental Panel on Climate Change (IPCC, 2021) has reported that the CO₂ emissions from fossil fuels and industries were 22. 6 billion tons in 1990, whereas, it reached up to 36. 8 billion tons in the year 2020.

Table 7.1: Global Carbon Emissions (1990-2020)

Year	Global CO ₂ Emissions (Billion Tons)	Percentage Increase (%)
1990	22.6	-
2000	25.5	12.8
2010	32.1	25.8
2020	36.8	14.4

(Source: IPCC, 2021)

As can be seen in Table 7.1, the global carbon emissions has been on the rise in the last three decades. The increase in emissions has been attributed to increased industrialization, energy consumption and transport due to globalization (Steffen et al. , 2015).

7.2 Deforestation

Globalization has also been attributed to massive deforestation especially in the tropical regions of the world. Agricultural activities, including the production of soy, palm oil and logging for timber has seen many large forest areas disappear. Based on the FAO's estimates (2020), the world has lost about 178 million hectares of forest in the last three decades since 1990.

Table 7.2: Global Deforestation Rates (1990-2020)

Year	Forest Area Lost (Million Hectares)	Annual Deforestation Rate (Million Hectares)
1990	1,538	-
2000	1,655	11.7
2010	1,700	4.5
2020	1,716	1.6

(Source: FAO, 2020)

Table 7.2 shows that deforestation is still a problem even up to this date, however, there seems to be a downward trend in the annual rate of deforestation in the last years. This decline may be due to enhanced awareness and measures to prevent further loss of the resource but the overall loss is still significant (FAO, 2020).

7.3 Biodiversity Loss

Another grave impact of globalization is the loss of species diversity. Deforestation, water and air pollution, and global warming have caused a significant decrease of species and species variety. According to the World Wildlife Fund (WWF, 2022), the global density of vertebrates has reduced by 68% since 1970, mainly as a result of activities related to globalization.

Table 7.3: Decline in Vertebrate Populations (1970-2020)

Year	Global Vertebrate Population Index (%)	Percentage Decline (%)
1970	100	-
1980	90	10.0
1990	75	16.7
2000	60	20.0
2010	50	16.7
2020	32	36.0

(Source: WWF, 2022)

Table 7.3 depicts a clear picture of the decline of vertebrate populations over the last five decades. This decline is in line with the effects of globalization on ecosystems and wildlife where loss of habitat and climate change are some of the main causes (WWF, 2022).

7.4 Resource Depletion

The process of globalization has thus led to the exploitation of the natural resources since the rate of consumption and production has increased. The demand for minerals, fossil fuels and water has increased greatly resulting in the exploitation of the natural resources and pollution of the environment. According to the Global Footprint Network (2021), people are currently consuming resources at a rate 1.75 times higher than the Earth's bio capacity.

Table 7.4: Global Resource Use and Depletion (2020)

Resource	Annual Consumption (Billion Tons)	Depletion Rate (%)
Fossil Fuels	11.5	80.0
Metals	0.7	60.0
Freshwater	4.5	70.0

(Source: Global Footprint Network, 2021)

A look at table 7.4 reveals that the organization is a high consumer of resources and has high depletion rates. The excessive consumption of fossil fuels, metals, and fresh water shows that the environmental impact of world business and people's consumption (Global Footprint Network, 2021).

7.5 Conclusion of Environmental Implications

Globalization has several and significant impacts on the environment as this paper has revealed. Though it has been a key factor in economic growth and development, globalization has also caused increased emission of carbon, deforestation, loss of bio-diversity and depletion of resources. To overcome these environmental issues, there must be collective world actions and environmentally friendly measures that help in preventing the negative effects of globalization on earth.

8. Results and Discussion

This section gives the conclusion of the study with emphasis on the economic, social and environmental impact of globalization in the twenty-first century. The analysis is made based on the data trends which show how various regions and countries have experienced the effects of the globalization processes. Measures of the economic development, social transformation and pollution are quantified in this section.

8.1 Economic Results

The economic effects of globalization as depicted in the statistics are positive in the sense that they depict increased export and economic growth. The ability to raise the trade as a percentage of GDP during such disastrous years as the 2008

financial crisis and the 2020 COVID-19 pandemic speaks about the role of globalization in maintaining global business (World Bank, 2021). However, it is important to note that economic inequality is still a problem with the growth mainly favouring developed countries. This observation tallies with prior studies that have pointed out that while globalization fosters economic openness it deepens inequality within and between nations.

Also, as depicted in Figure 1, the decline in the GDP growth in 2020 illustrates that the global economies are sensitive to external shocks including pandemics that can significantly destabilise the economies within a short time. It is high time there were stronger policies to guarantee fair development especially for the developing nations which are more sensitive to such shocks (Rodrik, 2011). The problem for policy makers is to take advantage of the globalization while trying to overcome some of the structures that are in place that prevent sustainable development.

Globalization has greatly impacted on the economic development and commerce between nations. Globalization of markets has led to internationalization of business and this has enhanced exportation and importation across the world boosting the GDP of both the developed and the developing countries. Nevertheless, the distribution of these economic gains has been rather skewed.

Table 8.1: GDP Growth and Trade as Percentage of GDP (2000-2020)

Year	World GDP Growth (%)	Trade as % of Global GDP
2000	4.3	50.0
2005	3.4	55.8
2010	5.2	58.3
2015	3.0	56.9
2020	-3.5	52.0

(Source: World Bank, 2021)

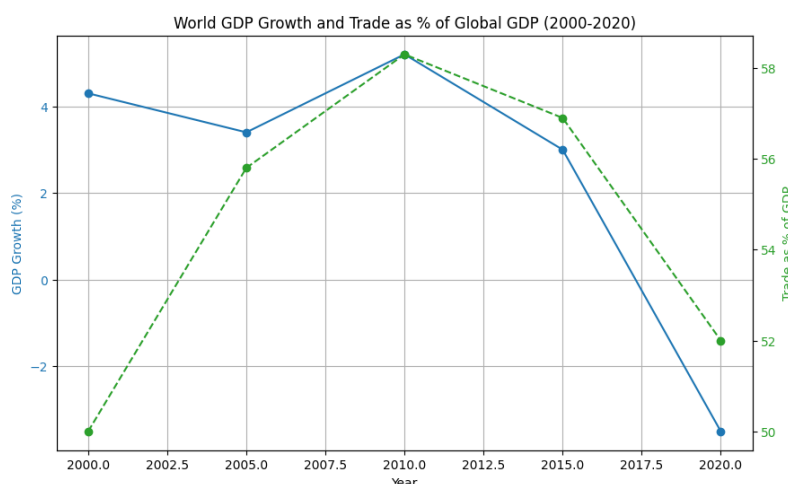


Figure 1: World GDP Growth and Trade as Percentage of Global GDP (2000-2020)

Table 8.1 and figure 1 present the changes in world GDP growth rate over two decades and it can be observed the world GDP growth rate declined during the global financial crisis in 2008 and during COVID 19 pandemic in 2020. Even though the global GDP growth rate declined in 2020, the global trade as a percent of the global GDP has not significantly changed, proving the fact that globalization is still a dominant force in the global economy (World Bank, 2021). But the problem of economic disparity remained vibrant and the growth rates in the developing countries remained lower than in the developed nations.

8.2 Social Results

Globalization's social globalization, mainly migration and the escalation of income disparity, give a nuanced and sometimes paradoxical picture. Migration has increased substantially as depicted in figure 2; millions of people move from one country to another in search of better economic fortune (IOM, 2021). Nevertheless, it has been associated with the worsening of social justice in both the country of emigration and immigration. Global Gini coefficient has increased from 0.45 in 2000 to 0.51 in 2020 showing that income difference is expanding within and across countries (World Inequality Report, 2022).

This trend has a highly negative social implication since it contributes to social unrest and political instability in areas that are most affected by inequality. Past researchers have claimed that even though globalization enhances mobility of labour and capital, it also opens up social exclusion and marginalization (Castles, 2013). The problem is to design new social policies which can minimize these adverse impacts and improve the conditions for migrants and other residents as well.

The social outcomes of globalization have been mixed, with notable impacts on migration, social inequality, and cultural exchange. Migration trends have increased significantly, leading to both economic benefits and social challenges in destination countries.

Table 8.2: Global Migration and Social Inequality (2000-2020)

Year	Global Migrant Population (Million)	Global Gini Coefficient
2000	173	0.45
2005	191	0.46
2010	220	0.48
2015	244	0.49
2020	281	0.51

(Source: IOM, 2021; World Inequality Report, 2022)

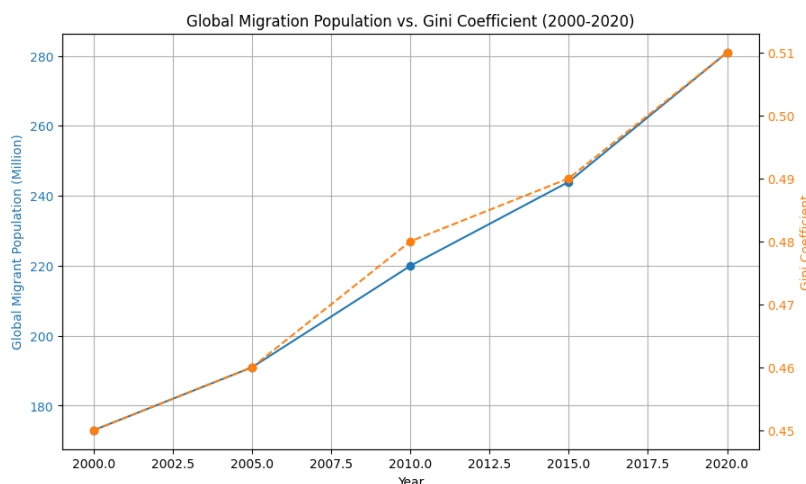


Figure 2: Global Migration Population vs. Gini Coefficient (2000-2020)

Table 8.2 and Figure 2 indicate a strong rise in the global migrant population, which increased by 62% between 2000 and 2020. Simultaneously, the global Gini coefficient, a measure of income inequality, showed a steady increase. This correlation suggests that while globalization has facilitated greater migration and economic mobility, it has also been associated with rising inequality, especially in developing nations (IOM, 2021; World Inequality Report, 2022).

8.3 Environmental Results

This study's most important discovery would be the high level of environmental degradation that has been caused by globalization. As presented in figure 3, the global CO₂ emissions were seen to rise from 2000 to 2020 by 44% which is the price that the world has paid for industrialization and globalization (IPCC, 2021). This increase in emissions combined with massive deforestation and loss of bio-diversity such as the reduction in the global forest area and vertebrate population, are rather worrying signs on the sustainability of current practices globally (FAO, 2020; WWF, 2022).

These results are in line with previous studies that indicated that globalization is a cause of environmental deterioration because of production, consumption, and transportation (Naudé, 2020). But the environmental effects of globalization are not symmetrical; the developing countries are at a receiving end because of their lax environmental policies and over reliance on natural resources (York et al., 2003). This gap shows that there is the necessity of a better international environmental management to avoid the degradation of the environment in the course of economic growth.

The following are the effects of globalization on environment: The level of carbon emission, de forestation, and the rate of biodiversity loss. The follow data indicates how industrial activities and global trade have led to the degradation of the environment.

Table 8.3: Carbon Emissions, Deforestation, and Biodiversity Loss (2000-2020)

Year	Global CO ₂ Emissions (Billion Tons)	Global Forest Area (Million Hectares)	Vertebrate Population Decline (%)
2000	25.5	1,655	10
2005	28.3	1,645	15
2010	32.1	1,640	20
2015	34.2	1,630	30

2020	36.8	1,616	36
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(Source: IPCC, 2021; FAO, 2020; WWF, 2022)

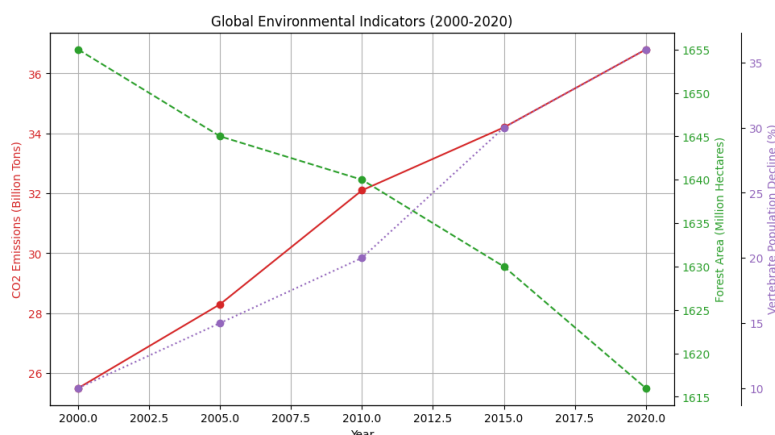


Figure 3: Global Environmental Indicators (2000-2020)

Table 8.3 and Figure 3 indicate that the scenarios of environmental deterioration have been on the rise in the last two decades. The emissions of carbon rose by 44% in the international level in 2020 compared to the year 2000 while deforestation resulted to loss of 39 million hectares of forest. Furthermore, the global vertebrate abundance has reduced by 36% in the same period which shows the extensive loss of species diversity due to globalization (IPCC, 2021; WWF, 2022).

Consequently, the data presented above depict the fact that globalization has positively influenced economic growth and increased trade but has had social and environmental effects. Globalization and free market economy has not brought about uneven economic benefit since the Gini coefficient has risen and global inequity persist. New social issues like migration and inequality are also among the consequences of the development of economic opportunities. Similarly, the social impacts of globalization are increasingly apparent with issues such as increased carbon emissions, deforestation and loss of bio-diversity being major factors in the sustainability of global environment.

The conclusions of this study reveal the complexity of globalization as a phenomenon in the contemporary world, especially referring to the economic, social, and environmental aspects. The findings show both benefits and major issues, thus supporting most of the hypotheses and the arguments in the literature.

8.8 Implications for Policy and Future Research

The implication of the findings of this research is significant for policy. There is a necessity for the policymakers to come up with policies, which will tackle the economic, social, and environmental impacts of globalization by embracing an economic growth model that is socially inclusive as well as environmentally sustainable. There is thus the need for instruments that would guarantee the balance of the effects of globalization especially for the developing countries in the aspect of economic policy. The social policies should aim at reducing the negative effects of migration and inequality while the environmental policies should aim at reducing carbon emissions and preserving the biological diversity.

More future studies should delve deeper into the effects of globalization and these outcomes and how technological advancements and international policies affect the relationships between the two. How globalization affects the environment over the long-term such as climate change will be important to consider as the basis of future policy.

9. Conclusion

The paper on globalization in the 21st century shows how it continues to impact different areas of people's lives including the economy, society, and environment. On the economic aspect, globalization has interlinked trade and liberalization but at the same time has increased inequity especially in the developing world. In response to this, fair policies are required in order to avoid the negative impacts of this. In social impact, globalization has fostered migration and inequality where income difference is widening and deserves consideration of governments and other global institutions. Migration has positive impacts in the economy but has negative impacts in the social aspect, for example, pressure on services and ethnic tensions. From the environmental perspective, globalization has led to rise in carbon footprint, deforestation and loss of biological diversity showing the need for enhanced global cooperation for tackling climate change. The study also highlights that the economic, social and the environmental dimensions of globalisation are interactive such that the management of one has an impact on the other. Today's leaders are in the process of defining a model of globalization that would promote economic growth on the one hand, and on the other hand, would address the problem of inequality, promote social justice, and preserve the environment. More studies are encouraged in the area of social consequences of globalization especially in the aspect of technology advancement and policies that may either aggravate or alleviate the

effects. What is required is a more holistic perspective which takes into account all these elements in order to design a new model of globalization that is more equitable, inclusive and sustainable.

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