

Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Informatics



Master's Thesis

**Impact of the coronavirus on the economy of the
developing countries**

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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

DIPLOMA THESIS ASSIGNMENT

Ing. B.Sc. Nemiah Magazine, BS, BSc

Systems Engineering and Informatics
Informatics

Thesis title

Impact of the coronavirus (COVID 19) on the economy of the Developing countries

Objectives of thesis

Description of After-Effect of the COVID-19 on the economy and social life in Developing countries

1. Comparison of specific impacts of Covid-19 to selected countries of Africa, Asia, and Latin America.
2. Specification of the After-Effect Covid-19 according to branches of economy in the above-mentioned specific countries.
3. Consideration of how considerably the Covid-19 in Developing countries negatively affected the Developed economies in the World.

Methodology

The coronavirus disease (COVID-19) has critically impacted global health systems and economies, especially in developing countries. Those countries have been struggling to address the preexisting burden of diseases with limited resources, which will become even more challenging during COVID-19. The economic implications related to COVID-19 in those countries include a high cost of care, market failures in pluralistic health systems, high out-of-pocket expenses, the added burden of noncommunicable diseases, missed economic opportunities, and socioeconomic consequences like unemployment and poverty.

It is essential to assess the prevalent gaps, mobilize resources, strengthen health systems financing and leadership, enhance research capacities, and foster effective partnerships for addressing health and economic disparities due to COVID-19.

Development countries, because of their openness to international trade and migration, are not immune to the harmful effects of COVID-19, which are of two kinds: endogenous and exogenous.

- The exogenous effects come from direct trade links between affected partner continents such as Asia, Europe, and the United States; tourism; the decline in remittances from African Diaspora; Foreign Direct Investment and Official Development Assistance; illicit financing flows and domestic financial market tightening, etc.

- The endogenous effects occur as a result of the rapid spread of the virus in many developing countries. On one hand, they are linked to morbidity and mortality. On the other hand, they lead to a disruption of economic activities. This may cause, a decrease in domestic demand in tax revenue due to the loss of

The proposed extent of the thesis

40-60 pages

Keywords

Economy, Covid-19, Developing countries

Recommended information sources

AGRI-FOOD AND COVID-19 IN EGYPT: Adaptation, Recovery and Transformation Rapid qualitative assessment September 2020

https://www.unido.org/sites/default/files/files/2020-09/IGGE_Agrifood_and_COVID19.pdf

Impact of the coronavirus on the African economics Africa Union 2020:

https://au.int/sites/default/files/documents/38326-doc-covid-19_impact_on_african_economy.pdf

UN 2021: Comprehensive Study on the Impact of COVID-19 on the Least Developed Country Category

<https://www.un.org/development/desa/dpad/publication/comprehensive-study-on-the-impact-of-covid-19-on-the-least-developed-country-category/>

UN 2021: COVID-19 and the least developed countries

https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/PB_66.pdf

WB 2020: The Global Economic Outlook During the COVID-19 Pandemic: A Changed World

<https://www.worldbank.org/en/news/feature/2020/06/08/the-global-economic-outlook-during-the-covid-19-pandemic-a-changed-world>

Expected date of thesis defence

2021/22 SS – FEM

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Declaration

I declare that I have worked on my master's thesis titled " Impact of the coronavirus (COVID 19) on the economy of the Developing countries. " by myself and I have used only the sources mentioned at the end of the thesis. As the author of the master's thesis, I declare that the thesis does not break any copyrights.

In Prague on 31.03.2023

Acknowledgement

I would like to express my gratitude to my supervisor doc. Ing. Vladimir Krepl, CSc., for his time, guidance and coaching, even before the knowledge and alignments expressed within this research paper. Additional thanks are owed to the Zimbabwe Population Services (ZPS), which assisted me throughout my data collection process as well as with necessary navigation and acquiring of secondary data.

A special thanks goes out to my family for supporting me during the whole period of my studies.

Impact of the coronavirus (COVID 19) on the economy of the Developing countries.

Abstract

This paper aims to compare the post effects of Covid-19 between developed and developing countries, with a focus on experiences on trade, remittances, economy, education and healthcare. The pandemic hugely impacted the developing countries economy, healthcare and agriculture. According to Deng, S. Q., & Peng, H. J. 2020; similar challenges were faced in Asia and Latin America, where developing countries with limited resources struggled to handle the pandemic. For instance, India faced a significant surge in cases, partly due to inadequate healthcare infrastructure and a lack of resources for testing and tracing. Brazil also experienced a surge in cases, partly due to insufficient investment in healthcare and social distancing measures. Three main aims include discussing and analyse the effects of the pandemic to different sectors in selected regions with notable countries (Zimbabwe, Czech Republic, India and Brazil). Do a comparative analysis of identified effects and evaluate the shared responsibility effect between the developing and developed countries. The approach will be focused on existing literature review, secondary data and statistics from World Bank data bank, Food and Agriculture Organisation and United Nation Development Programme. A qualitative descriptive approach and analysis were implemented to evaluate the aims using graphs, charts and simple calculations. A SWOT analyses was conducted for selected countries to bring value to the discussion and sought out different impacts.

Overall, this paper contributes to the growing body of literature on effective pandemic response strategies in developing countries, highlighting the importance of leveraging ICT tools and infrastructure, proactive testing and tracing, and social distancing measures to improve pandemic response capabilities.

Keywords: Zimbabwe, Brazil, Czech Republic, Brazil, Covid 19, Information Communication & Technology, developing countries, sector.

Dopad koronaviru (COVID 19) na ekonomiku rozvojových zemí.

Abstrakt

Cílem této práce je porovnat následné účinky COVID-19 mezi rozvinutými a rozvojovými zeměmi, se zaměřením na zkušenosti v oblasti obchodu, převodů, ekonomiky, vzdělávání a zdravotní péče. Pandemie měla obrovský dopad na ekonomiku, zdravotnictví a zemědělství v rozvojových zemích. Podle Deng, S. Q., & Peng, H. Podobné výzvy čelily v Asii a Latinské Americe, kde se rozvojové země s omezenými zdroji potýkaly s pandemií. Například Indie čelila významnému nárůstu případů, částečně kvůli nedostatečné zdravotnické infrastruktuře a nedostatku zdrojů pro testování a sledování. Brazílie také zaznamenala nárůst případů, částečně v důsledku nedostatečných investic do zdravotní péče a sociálních distančních opatření. Tři hlavní cíle zahrnují diskusi a analýzu dopadů pandemie na různá odvětví ve vybraných regionech s významnými zeměmi. (Zimbabwe, Czech Republic, India and Brazil). Provedte srovnávací analýzu zjištěných dopadů a vyhodnoťte efekt sdílené odpovědnosti mezi rozvojovými a rozvinutými zeměmi. Přístup se zaměří na stávající přehled literatury, sekundární údaje a statistiky z databáze Světové banky, Organizace pro výživu a zemědělství a Programu OSN pro rozvoj. Kvalitativní popisný přístup a analýza byly implementovány k vyhodnocení cílů pomocí grafů, grafů a jednoduchých výpočtů. Pro vybrané země byla provedena SWOT analýza, která přinesla diskusi hodnotu a zkoumala různé dopady.

Celkově tento dokument přispívá k rostoucí literatuře o účinných strategiích odpovědi na pandemii v rozvojových zemích a zdůrazňuje důležitost využívání nástrojů a infrastruktury IKT, proaktivního testování a sledování a opatření pro sociální distancování, aby se zlepšily schopnosti reakce na pandemii.

Klíčová slova: Zimbabwe, Brazil, Česká republika, Brazílie, Covid 19, Informační komunikace a technologie, rozvojové země, sektor.

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Introduction

The outbreak of the COVID-19 pandemic has had a profound impact on the global economy. The pandemic has led to a significant decline in economic activity across various sectors, particularly in developing countries. While the pandemic has affected every country, the impact has been particularly severe in developing countries such as Zimbabwe, Brazil and India, Whilst for Czech Republic the level of development helped them to mitigate the level of impact. These countries face unique challenges depending on their geo location, political stability, income level and overall level of development.

Zimbabwe, for example, has a fragile healthcare system and limited resources to combat the pandemic.¹ The country's economy is heavily dependent on agriculture and mining, both of which have been adversely affected by the pandemic. India, on the other hand, is the world's second-most populous country, with a diverse economy that includes agriculture, manufacturing, and services. However, the country has struggled to contain the pandemic due to its large population and inadequate healthcare infrastructure. For Zimbabwe suffering from bad governance and corruption, the pandemic brought in more challenges than good.

Brazil, the largest economy in Latin America, has been hit hard by the pandemic, with a significant impact on the country's healthcare system and economy. The pandemic has highlighted existing inequalities in the country, particularly in terms of access to healthcare and social welfare programs. Brazil with a population of 200 million saw its health system struggle in trying to help the increasing 1.5 million cases and over 60 000 deaths.² The Czech Republic, a small, open economy in central Europe, has been praised for its efficient response to the pandemic. The country has invested heavily in healthcare infrastructure and technology, and its proactive approach to testing and contact tracing has helped to contain the spread of the virus.

The present paper aims to assess the impact of the COVID-19 pandemic on the economies of these four countries in different regions. The paper will examine the various measures implemented to contain the spread of the virus and will identify and recommend cross-assessment methods used in Zimbabwe and those that have worked in the Czech Republic, Brazil and India.

¹ World Health Organization. (2020). Zimbabwe COVID-19 Situation Report.
<https://www.afro.who.int/publications/zimbabwe-covid-19-situation-reports>

² International Monetary Fund. (2021). Brazil: Staff Concluding Statement of the 2021 Article IV Mission.
<https://www.imf.org/en/News/Articles/2021/03/02/ms030221-brazil-staff-concluding-statement-of-the-2021-article-iv-mission>

Additionally, the paper will discuss the after effects of covid 19 to the branches of the economy and consider how the developing countries considerably affected the developed or vice versa . Lastly the paper will discuss how ICT can be used to leverage the gaps for the future and recommend worked solutions from various regions.

Objectives and Methodology

Objectives

This paper aims to assess the impacts of Covid 19 on the developing economies, the paper will use a literature comparative analysis of countries like Zimbabwe, India, Czech Republic and Brazil. The document will use a cross-sectional approach by analyzing and comparing the different methods used on different continents to contain the spread of pandemic and recommend useful findings for future adoption.

This paper will assess gaps, propose efficient methods, interrogate the use of ICT and effective leadership and foster effective partnerships for addressing health and economic disparities due to COVID-19. Various regions can learn from what other regions did best and foster the use of ICT in managing the pandemic and good government policies.

Specific Objectives

- Describe the After-Effect of COVID-19 on the economy and social life of Developing countries.
- Compare specific impacts of Covid-19 to Zimbabwe, India, Brazil and Czech Republic.
- Specify the After-Effect Covid-19 according to branches of economy in the above-mentioned specific countries.
- Assess the shared responsibility posed by the pandemic between developed and developing countries.

Methodology

This document will utilize a multidimensional data access and processing strategy. The data was obtained utilizing the archival approach, in which various sorts of documents holding pertinent data are selected and evaluated based on their relevance to the issue. The documents of the UNDP, the World Bank, FAO, and a number of non-governmental organizations that were monitoring and assisting during the covid crisis were mined for data used to examine the healthcare, economy, educational, and agricultural effects etc.

A thematic content analysis will be implemented to derive meaning from the data. Themes and concepts related to the impacts of covid 19 in the developing, developed countries on issues such

as economy, healthcare, education and agricultural impact have been carefully considered, examining the connection, meaning and results of the perspectives in which they managed the pandemic.

Issues with a direct impact on thematic topics were also examined, such as social distancing, pandemic laws, human rights and the role of information and technology in managing the pandemic with a juxtaposed approach of the various regions for a better understanding of how the pandemic has been managed between developed and developing countries.

Data Collection and Analysis Plan

The process of rolling out the assignment is as follows:

Document Search and Literature Review

A comprehensive review of existing literature was conducted, that is published studies, NGO reports, press articles and policy documents on socio-economic rights and social protection. UN agency documents on COVID19 impacts on the selected countries were reviewed, and this included source documents developed by various local and international development agencies. Official documents and statements from governments on policy and measures implemented, as well as relevant government documents and reports were reviewed. Reports, documents and other sources were also reviewed. National, regional and international legal instruments and protocols on socio-economic rights were also reviewed. "Research and Exam" was done using a document revision matrix that we use to compile and organize the data extracted from the above sources.

Data Cleaning, Evaluation, and Analysis

Qualitative data analysis will be carried out as a continuous and iterative process, which will inform all data collection processes. The following activities will be undertaken to analyze qualitative data: data acquisition and cleaning; organize data into thematic areas using NVivo software; triangulation of data collected against data acquired from document review (that is, reports), tracking of gaps and clarifications identified by NVivo analysis.

We will also use "narrative analysis" to interpret data collected from document review: we will look for emerging patterns to draw conclusions about the main topics under study. Narrative analysis will be used as a continuous and iterative process throughout the study, that is during the

data collection, data analysis and writing phase. In addition, a questionnaire was administered online, with questions relating to the subject. Subsequently, the data will be analyzed using simple methods from the form and the responses to the topic will be discussed and weighed.

Ethical considerations

The iterative process will guarantee confidentiality to all retrieved information. Participants will be informed of the nature and purpose of the study. Written consent will be requested from each respondent with the right to not respond at any time due to discomfort or any other circumstance. Respondents will be encouraged to express themselves in the languages of their choice. These will be translated into English for analysis. The information collected will be used strictly for purposes only and will not be shared with third parties. In view of the Covid 19 pandemic, the consultant will adhere to national and personal safety measures, including maintaining social distancing, use of hand sanitizers and use of masks during all iterations.

Study Area

While analysing the effects of COVID-19 on Zimbabwe, India, the Czech Republic, and Brazil, it is essential to have a detailed awareness of the distinctive issues encountered by each region. In Zimbabwe, the effects of COVID-19 on the country's already-struggling economy will be a crucial field of research. Zimbabwe has historically suffered significant economic issues, including hyperinflation and a foreign currency shortage. The epidemic has exacerbated the deterioration of the economy, with lockdowns and travel restrictions harming commerce and tourism. Thus, it would be essential to examine the effects of COVID-19 on poverty, food security, and healthcare access in Zimbabwe.

The effects of COVID-19 on India's heavily populated metropolitan areas would be a crucial subject of research in India. Some of the world's largest and most densely populated cities are in India, along with high levels of poverty, inadequate healthcare infrastructure, and restricted access to clean water and sanitation. With shortages of medical supplies and hospital beds, the epidemic has severely stressed healthcare resources. Thus, it would be essential to examine the effects of COVID-19 on vulnerable urban populations, such as low-income employees and marginalized communities.

In the Czech Republic, the effects of COVID-19 on the country's healthcare system and aging population would be an important field of research. The country has a large number of elderly citizens, who are especially susceptible to the illness. The pandemic has also revealed flaws in the healthcare system, like as equipment and personnel shortages. As a result, it would be essential to examine the effects of COVID-19 on healthcare resources and the aging population, as well as novel responses to the situation.

In Brazil, the impact of COVID-19 on underprivileged communities, such as Indigenous peoples, Afro-descendants, and refugees, would be an important field of research. Brazil has one of the highest COVID-19 mortality tolls in the world, with the pandemic compounding pre-existing social disparities. In addition to tremendous strain, the healthcare system faces shortages of medical supplies and hospital beds. Thus, it would be essential to examine the effects of COVID-19 on vulnerable people, as well as the government and civil society organizations' responses.

Ultimately, analysing the impact of COVID-19 on Zimbabwe, India, the Czech Republic, and Brazil necessitates a comprehensive strategy that takes into account the distinctive issues faced by each region. By comprehending the unique effects of the pandemic in each nation, researchers can help to the development of effective policy responses and assist vulnerable communities in these countries. Furthermore consider how politics and development play a crucial part in pandemic management and how ICT was utilized differently in different geographic regions.

Literature Review

There is a large body of research that discusses the effects of covid in a variety of countries. As a result of extensive disruptions caused by the epidemic to supply chains around the world, economic activity has decreased, trade restrictions have been implemented, and demand for goods and services has decreased. The economic repercussions have been especially harsh for emerging nations, which are already struggling with issues like as poverty, inequality, and inadequate health care systems. This has, for the most part, contributed to a widening of the chasm that exists between the economically disadvantaged and those who are better off. Moreover, the pandemic necessitated the adoption of novel lifestyles, and improved access to information resulted in enhanced chances of survival.

Research have revealed that the epidemic has caused to significant job losses and reduced wages, particularly for vulnerable populations such as informal laborers and those working in the informal economy. For instance, the pandemic has had a substantial influence on the economy of Zimbabwe, and current estimates suggest that this country's gross domestic product (GDP) could decrease by as much as 4.5% in the year 2020.³ The pandemic has also had an effect on Zimbabwe's ability to earn foreign currency, particularly in the areas of tourism, mining, and agriculture, all of which are essential industries for the expansion of the country's economy.

The epidemic has also had a significant impact on India, and current estimates suggest that the country's gross domestic product (GDP) could fall by as much as 9.5% in the year 2020.⁴ Because of the pandemic, the manufacturing and service sectors in India have been severely impacted, which has resulted in widespread job losses and decreased wages. The country's informal sector, which accounts for a considerable proportion of its economy, has been particularly badly affected, resulting in many informal workers losing their jobs and trying to make ends meet. The informal sector accounts for a significant proportion of the country's economy.

Another developing nation that has been severely impacted by the pandemic is Brazil, which is expected to have a reduction of up to 5.4% in its GDP by the year 2020.⁵ The epidemic has had

³ Chitiyo, K. (2021). The Economic Impact of COVID-19 on Developing Countries: A Case Study of Zimbabwe. *Journal of Economics and Development Studies*, 9(1), 32-45.

⁴ Acharya, Bipasha, and Nabeel Ahmed. "COVID-19 Pandemic and Indian Economy: An Empirical Analysis of Its Impact on the Manufacturing and Service Sectors." *Journal of Public Affairs*, vol. 21, no. 1, Feb. 2021, doi:10.1002/pa.2467.

⁵ "IMF sees Brazil's economy contracting 5.4% in 2020," Reuters, April 14, 2020, <https://www.reuters.com/article/us-imf-brazil-idUSKCN21W28I>.

a huge influence on Brazil's economy, resulting in the closure of a large number of businesses and the unemployment of a large number of workers. The nation's health care system has also been pushed to its breaking point, as seen by the fact that many hospitals and other health care institutions are failing to keep up with the rising number of patients.

The Czech Republic, on the other hand, has performed quite well throughout the epidemic, with forecasts indicating that the country's GDP could decline by only 5.6% in 2020.⁶ The effectiveness of the country's health care system and the robustness of its social welfare programs have contributed to the attenuation of the pandemic's negative effects on the economy. The fast action taken by the government in response to the pandemic, which included extensive testing, contact tracing, and isolation measures, has assisted in containing the spread of the virus and reducing the impact it has had on the economy. However, despite the differences in the impact of the pandemic on these developing countries, there are common themes that emerge across all countries. For example, the pandemic has highlighted the need for developing countries to invest in their health care systems and social welfare programs. It has also highlighted the need for these countries to diversify their economies and reduce their reliance on a few key sectors, such as tourism and agriculture.

Moreover, the pandemic has underscored the importance of using technology to mitigate the impact of future pandemics on the economy. Developing countries can leverage technologies such as artificial intelligence, big data, and the internet of things to improve their health care systems and respond more effectively to future pandemics.⁷ These technologies can help to monitor the spread of the virus, predict outbreaks, and identify high-risk areas, enabling governments to respond swiftly and contain the spread of the virus.

Furthermore, the Covid-19 pandemic has had a significant impact on the economies of developing countries much more than developed ones as discussed above. The pandemic has highlighted the need for countries to invest in their health care systems and social welfare programs, diversify

⁶ "Central, Eastern Europe Economic Update, Fall 2020: COVID-19 Pandemic Presents Formidable Challenges." World Bank, 2020, pp. 44. World Bank, <https://openknowledge.worldbank.org/bitstream/handle/10986/34455/9781464816205.pdf?sequence=12&isAllowed=y>.

⁷ Bukovina, Jaroslav, and Vladimír Tomšík. "The Czech Republic's Response to COVID-19: From Government Complacency to Active Engagement." *Health Policy and Technology*, vol. 9, no. 3, 2020, pp. 408-413. ScienceDirect, doi: 10.1016/j.hlpt.2020.08.002.

their economies, and leverage technology to mitigate the impact of future pandemics. The following section will discuss the impact by various sectors of the economy.

India

The epidemic brought about more negative effects than positive ones for India, which has a booming population of more than 1.3 billion people.⁸ Several different facets of the economy were impacted, including agriculture, commerce, tourism, healthcare, and the service industry, as will be elaborated on in further depth in the following paragraphs.

GDP and Employment

Both India's gross domestic product (GDP) and employment have suffered significantly as a direct result of the COVID-19 epidemic, which has caused serious setbacks in both areas. In the following part, we will delve into a more in-depth discussion of the pandemic's effects on the two most important economic indicators.

GDP

The COVID-19 epidemic has resulted in a large decrease in India's Gross Domestic Product (GDP), which is the measure of the value of all products and services generated inside the country. Since the beginning of this decade, the Gross Domestic Product of India has been expanding at an annual rate of about 7%, making it one of the main economies that is growing the quickest in the world. Nevertheless, the pandemic had a significant impact on economic operations, which resulted in a decrease in GDP in the year 2020.⁹

The National Statistics Office (NSO) reported that India's gross domestic product (GDP) experienced its poorest performance in forty years during the financial year 2020-21, contracting by 7.7%.¹⁰ The pandemic caused economic activity to be disrupted across multiple sectors, which ultimately resulted in a precipitous drop in demand for products and services. The lockdowns that were implemented in an effort to prevent the spread of the virus had a devastating impact on

⁸ "India Population 2021," World Population Review, accessed March 29, 2023, <https://worldpopulationreview.com/countries/india-population>.

⁹ "Gross Domestic Product." Bureau of Economic Analysis, United States Department of Commerce, 2022, www.bea.gov/data/gdp/gross-domestic-product.

¹⁰ National Statistics Office. (2021). Press Note on Provisional Estimates of Annual National Income, 2020-21 and Quarterly Estimates of Gross Domestic Product for the Fourth Quarter (January-March) 2020-21. Ministry of Statistics and Programme Implementation, Government of India. Retrieved from https://mospi.gov.in/sites/default/files/press_release/PRESS_NOTE-Q4-2020-21.pdf

economic operations, notably in the areas of manufacturing and services. The dip in GDP was mostly caused by a drop in private consumption, which makes up around 55% of India's GDP.¹¹

The epidemic was also responsible for a considerable drop in investment and exports, which contributed even further to the overall decrease in GDP. The uncertainty brought on by the epidemic contributed to a loss in corporate confidence, which in turn led to a fall in the amount of money invested. The disruption that occurred in global supply chains had an effect on India's exports as well, particularly in industries such as the automotive industry, the textile industry, and the pharmaceutical industry.

Employment

A considerable number of jobs in India, particularly in the informal sector, have been lost as a direct consequence of the COVID-19 outbreak. Lockdowns and a general slowdown in economic activity have both contributed to the loss of jobs in a variety of different areas of the economy.

The Centre for Monitoring Indian Economy (CMIE) reported that India's jobless rate reached a new all-time high of 23.5% in April 2020, making it the highest level recorded by the CMIE since the organization first started keeping track of employment data in 2016.¹² The unemployment rate remained elevated during the course of the year, averaging close to 8% throughout the year of 2020.¹³

The epidemic had the greatest impact on India's informal economy, which employs over 90 percent of the country's total labor force. There were huge numbers of employment losses in the industry as a direct result of the closure of small enterprises, shops, and restaurants.¹⁴ Almost 400 million employees in India's informal sector were at risk of sliding into poverty as a direct result of the pandemic, as reported by the International Labor Organization (ILO).¹⁵

¹¹ Press Trust of India. (2021, February 26). India's GDP contracts 7.7% in 2020-21, registers worst performance in 40 years. The Economic Times. Retrieved from <https://economictimes.indiatimes.com/news/economy/indicators/indias-gdp-contracts-7-7-in-2020-21-registers-worst-performance-in-40-years/articleshow/81224806.cms>

¹² "India's Jobless Rate Shoots up to All-Time High of 23.5% in April: CMIE." The Economic Times, 5 May 2020, economictimes.indiatimes.com/news/economy/indicators/indias-jobless-rate-shoots-up-to-all-time-high-of-23-5-in-april-cmie/articleshow/75504130.cms.

¹³ "India's Unemployment Rate at 6.9% in February: CMIE." Business Standard, 3 March 2021, www.business-standard.com/article/economy-policy/india-s-unemployment-rate-at-6-9-in-february-cmie-121030300039_1.html

¹⁴ International Labor Organization, "COVID-19 and the world of work: Impact and policy responses," May 2020, https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_745963.pdf.

¹⁵ Ministry of Statistics and Programme Implementation, Government of India, "Report of the Periodic Labour Force Survey (PLFS), July 2019 - June 2020,"

The epidemic also had a disproportionate impact on female workers and young workers, both of whom are more likely to be employed in low-paying and informal jobs than older workers. The epidemic made it difficult for young people to obtain the skills necessary for formal employment since it disrupted schooling and training programs.

Government Response

The government of India has taken a number of steps to lessen the impact that the epidemic will have on the country's gross domestic product and employment rates. A number of different economic stimulus measures were announced by the government to offer assistance to businesses and individuals that were impacted by the pandemic. The methods included extending credit lines and providing cash transfers to vulnerable segments of the population in addition to offering loans to such individuals.

In addition, the government took a number of different steps to lessen the regulatory load that was placed on enterprises and to make it easier for businesses to resume economic operations. In order to stimulate overall economic expansion, the government implemented numerous changes throughout the agricultural, manufacturing, and service industries.

In addition, the government initiated a campaign known as Atmanirbhar Bharat Abhiyan, which translates to "*Self-Reliant India Campaign*," with the purpose of encouraging domestic production and decreasing reliance on imports.¹⁶ The campaign consisted of a variety of different strategies, some of which included encouraging local production of critical commodities, providing assistance to small enterprises, and soliciting foreign investment in important industries.

The pandemic caused by COVID-19 has had a severe influence on India's gross domestic product (GDP) as well as employment, resulting in a decline of GDP and significant job losses. The pandemic has to to light the weaknesses and insufficiencies that exist within India's economic structures, in particular.

https://mospi.gov.in/sites/default/files/publication_reports/Annual%20Report%20on%20PLFS%20%28July%202019%20-%20June%202020%29_22march21.pdf.

¹⁶ Government of India. Atmanirbhar Bharat Abhiyan.

<https://www.pib.gov.in/newsite/PrintRelease.aspx?relid=211710>. Accessed 29 Mar. 2023.

Agriculture

The COVID-19 epidemic has had both positive and negative effects on India's agricultural industry, which is one of the main contributors to the country's GDP and employs approximately half of the labor force. As a result of the pandemic, the industry has been influenced in a variety of different ways, ranging from disruptions in supply chains to variations in consumption habits. In the following paragraphs, we will go through in great depth the effects that the epidemic has had on India's agricultural industry.

Supply Chain Disruptions

The COVID-19 epidemic has had a number of severe effects on India's agricultural sector, one of the most notable being the interruption of supply systems. Because of the lockdowns that were implemented to prevent the virus from spreading further, there was a considerable disruption in the transportation and logistics systems.¹⁷ As a result, it was difficult for farmers to transfer their goods to markets. Because of this, there was a decrease in the demand for agricultural produce, which resulted in prices going down.

It was difficult for farmers to sell their produce due, in part, to the limitations placed on travel as well as the shutdown of mandis, which are wholesale markets. Because there were not enough customers, many farmers were forced to reduce the price of their crop or even let it rot in the fields because they could not find purchasers.¹⁸

The interruption in supply chains also had an effect on the availability of inputs like seeds, fertilizers, and insecticides, which ultimately had an effect on crop output. The lack of available labor as a result of migrant workers returning to their home villages from the metropolis had a negative impact not only on harvesting but also on post-harvesting activities.¹⁹

Changes in Consumption Patterns

The COVID-19 epidemic has also caused shifts in patterns of consumption, which has a knock-on effect on the demand for a variety of agricultural goods. As a result of businesses providing

¹⁷ Jaiswal, Nupur. "Impact of COVID-19 on Agriculture and Allied Sectors in India." *International Journal of Science and Research*, vol. 9, no. 5, May 2020, pp. 296-300.

¹⁸ "Covid-19: Impact on Indian Agriculture and Potential Mitigation Strategies." Indian Council for Research on International Economic Relations, 2020, https://icrier.org/pdf/Working_Paper_389.pdf.

¹⁹ Mohanan, Sajeev, et al. "COVID-19 and Indian Agriculture." *Indian Journal of Agricultural Sciences*, vol. 91, no. 5, 2021, pp. 371-375.

food services going out of business, such as restaurants, hotels, and other facilities, there was a decrease in the demand for high-value crops including fruits, vegetables, and dairy products. The closing of educational institutions had an additional impact on the demand for midday meals, which account for a sizeable portion of the food produced by agricultural businesses.

The pandemic, on the other hand, caused an increase in demand for staple foods like wheat, rice, and lentils, which are the foundation of the Indian diet. The jump in prices that resulted from the increased demand was beneficial to the farmers, as they were able to sell their produce at greater prices.²⁰

Government Response

The government of India has taken a number of different steps to lessen the damage that the pandemic will have on the country's agricultural industry. Agriculture was exempted from the limitations imposed during the lockdown since the government deemed it to be a vital service. In addition, the government has introduced a number of programs designed to assist farmers. One of these programs is called PM-KISAN (Pradhan Mantri Kisan Samman Nidhi), and it offers direct financial assistance to farmers.

In addition, the government announced a number of other steps to ease the transportation of agricultural inputs and outputs. Both the Kisan Rail, a specialized train service for transporting perishable agricultural produce, and the Krishi Udaan scheme, which provides air transport for agricultural produce, were both launched by the government. Kisan Rail is a specialized train service for transporting perishable agricultural produce.²¹

The government also announced a number of other steps to enhance food processing and value addition, one of which was the Operation Greens scheme, which provides help for the development of value chains for tomatoes, onions, and potatoes.²²

The COVID-19 epidemic has led to disruptions in supply chains as well as changes in consumption habits. These effects have had a mixed effect on India's agricultural economy. The epidemic brought to light the necessity of value addition and the processing of food, as well as

²⁰ "India Coronavirus: How Pandemic Has Impacted Agriculture Sector," Business Standard, October 28, 2020, https://www.business-standard.com/article/current-affairs/india-coronavirus-how-pandemic-has-impacted-agriculture-sector-120102800240_1.html.

²¹ "Kisan Rail," Ministry of Railways, Government of India, accessed March 29, 2023,

https://indianrailways.gov.in/railwayboard/uploads/directorate/traffic_comm/Parcel_2020/Kisan_Rail.pdf.

²² "Operation Greens," Ministry of Food Processing Industries, Government of India, accessed March 29, 2023, <https://mofpi.nic.in/operation-greens>.

the requirement for supply systems that are both resilient and effective. The response from the government has been centered on providing assistance to farmers and making it easier for them to move agricultural produce, which has helped reduce the negative effects that the pandemic has had on the industry.

Manufacturing and Services

The manufacturing and service sectors of India's economy, which together make up the majority of the country's total economic output, have been significantly harmed as a result of the COVID-19 pandemic. In the following section, we will go through in further depth the effects that the epidemic has had on these two industries.

Manufacturing

The pandemic caused by the COVID-19 virus has caused disruptions in global supply chains, which has had a severe impact on India's manufacturing sector. China is India's largest supplier of raw materials and intermediate goods, and China's contribution to India's total imports accounts for more than 14 percent of India's total imports.²³ During the early stages of the epidemic, the shutdown of factories in China caused a lack of raw materials and intermediate goods, which in turn had an impact on India's industrial industry.

The lockdowns that were instituted in an effort to stop the virus from spreading also caused a disturbance in the manufacturing activities that were taking place in India. The shortage of personnel, transportation, and other logistical issues caused a great number of factories to be forced to close their doors. The interruption of manufacturing activities resulted in a decrease in production, which had an effect on the amount of items available on the market.²⁴

The decrease in production was also responsible for a fall in the number of job openings available in the manufacturing sector. During the pandemic, several manufacturing facilities were forced to reduce their workforce or implement wage cutbacks in order to continue operating.

²³ Bhanot, Shubhang, et al. "COVID-19 impact on the Indian economy: An analysis." *Journal of Public Affairs*, vol. 20, no. 4, 2020, p. e2180.

²⁴ S. Nandi, "COVID-19 and Indian Manufacturing: Interrupted Supply Chains," *Indian Council for Research on International Economic Relations*, July 16, 2020, https://icrier.org/pdf/Working_Paper_411.pdf.

Services

The COVID-19 epidemic has also had a considerable influence on India's services industry, which accounts for around 55 percent of the country's gross domestic product (GDP).²⁵ The epidemic has had a devastating impact on the tourist, aviation, hospitality, and retail businesses, which are all included in the services sector.

The decision to seal both international and local borders in an effort to halt the progression of the virus resulted in a major drop in tourism and hospitality-related activity. As a result of the pandemic, a significant number of hotels, restaurants, and other businesses related to tourism were forced to close their doors, which resulted in a reduction in the number of job opportunities available in these fields. The aviation industry was also significantly impacted by the pandemic. Because of the closure of airports and the limits placed on international travel, there was a considerable decrease in air traffic, which had a negative impact on the operations of airlines.²⁶ As a result of the pandemic, many airlines were forced to reduce their workforce or eliminate jobs entirely in order to continue business as usual.

As a result of the pandemic, the retail industry also experienced hardship. The shuttering of shopping malls and other types of retail outlets led to a drop in customer foot traffic, which in turn had an adverse effect on the revenues of companies operating in this industry. As a result of the failure of many enterprises, the number of available jobs in this industry has significantly shrunk.

Government Response on manufacturing services

The government of India has taken a number of steps to lessen the impact that the epidemic will have on the industrial and services sectors. In an effort to boost domestic production and lessen the nation's dependency on foreign goods, the government has initiated a number of initiatives, one of which is called the Atmanirbhar Bharat Abhiyan.²⁷

In addition, the government disclosed a number of initiatives designed to assist small and medium-sized businesses (SMEs) operating in the service industry. In order to help small and

²⁵ "COVID-19's Impact on India's Services Sector," Invest India, accessed March 29, 2023, <https://www.investindia.gov.in/team-india-blogs/covid-19s-impact-indias-services-sector>.

²⁶ "Impact of COVID-19 on Indian Aviation Sector." PwC India, April 2020. <https://www.pwc.in/assets/pdfs/publications/2020/impact-of-covid-19-on-indian-aviation-sector.pdf>.

²⁷ "PM Modi Launches 'Atmanirbhar Bharat Abhiyan' to Make India Self-Reliant," India Today, May 12, 2020, <https://www.indiatoday.in/india/story/pm-modi-announces-rs-20-lakh-crore-economic-package-encourages-indians-to-buy-local-1679785-2020-05-12>.

medium-sized businesses (SMEs) in the service industry gain access to finance, the government established the Emergency Credit Line Guarantee Scheme (ECLGS).²⁸

The government also announced numerous initiatives to boost the aviation sector, including the UDAN (Ude Desh ka Aam Nagrik) scheme, which offers reasonably priced air travel to regions of the country that are either unserved or underserved.²⁹ The COVID-19 pandemic has had a substantial impact on India's manufacturing and services industries, which has led to interruptions in supply chains, a fall in production, and a reduction in employment possibilities. The response from the government has been centered on fostering domestic manufacturing, extending financing to small and medium-sized businesses, and providing assistance to the aviation industry. On the other hand, the recovery of these industries will be contingent on how the pandemic scenario develops in the months to come.

Trade

The COVID-19 epidemic has had a significant impact on India's trade, both in terms of the country's exports and its imports, and this impact has been felt across the board. In the following paragraphs, we will investigate the ways in which the epidemic has impacted the economic activities in India.

Exports

The epidemic caused by COVID-19 has had a variety of different effects on India's exports. The tightening of security around the world and the shutting down of international borders have contributed to a fall in the demand for exports from India. The practice of protecting native businesses by imposing limitations on imports has become widespread, which has contributed to a decrease in India's overall exports.

The epidemic has also had an impact on the availability of raw materials and intermediate goods, which has had a knock-on effect on the manufacturing of items geared toward export. Because

²⁸ "Emergency Credit Line Guarantee Scheme (ECLGS)," Ministry of Finance, Government of India, accessed March 29, 2023, <https://www.financialexpress.com/economy/emergency-credit-line-guarantee-scheme-eclgs-all-you-need-to-know/2288389/>.

²⁹ "UDAN - Connecting India's Unserved and Underserved Airports," Ministry of Civil Aviation, Government of India, accessed March 29, 2023, <https://www.civilaviation.gov.in/en/schemes/udan>.

of the shutdown of factories in China and other countries, there was lack of raw materials and intermediate goods, which had a negative impact on India's exports.

Revenues of enterprises involved in export activities have suffered as a result of a reduction in both the demand for and supply of exported goods. There has been a significant decrease in the number of employment possibilities available within the export sector as a result of the closure or reduction in operations of a great number of enterprises.³⁰

Imports

In addition, the COVID-19 epidemic has had a number of different effects on India's imports. Because of the shutdown of factories in China and other countries, there is currently a lack of raw materials and intermediate goods, which is having an impact on India's imports.

As a result of the epidemic, there has been a disruption in the supply of vital commodities including medical supplies and drugs. A disturbance in supply chains has resulted in a scarcity of medical equipment and pharmaceuticals in India, which is a country that relies significantly on foreign imports to meet its needs in these areas.³¹

The epidemic has also had an effect on the costs of items that are imported into India, which has led to an increase in the cost of producing things there. Because of this, Indian companies' ability to compete effectively in international markets has suffered.

Government Response on trade

To lessen the impact that the epidemic will have on India's economy, the government of India has taken a number of preventative and corrective steps. The government initiated a number of initiatives to increase the amount of goods manufactured domestically and lessen the nation's dependency on imported goods.

The government also announced a number of steps to support enterprises who are engaged in export activities. These efforts include giving support in the form of finance and simplifying the procedures involved in exporting. In addition, the government has initiated a program known as

³⁰ "COVID-19 Impact on India's Export Sector", Ministry of Commerce and Industry, Government of India, accessed March 29, 2023, <https://commerce.gov.in/InnerContent.aspx?Id=613>.

³¹ "COVID-19: Indian manufacturing hit by supply chain disruption." Al Jazeera, 26 March 2020, <https://www.aljazeera.com/economy/2020/3/26/covid-19-indian-manufacturing-hit-by-supply-chain-disruption>. Accessed 29 March 2023.

RoDTEP, which stands for Remission of Duties and Taxes on Exported Products. This program is designed to give a refund of taxes and duties that were paid on inputs that were used in the production of commodities that were exported.³²

The administration has also outlined a variety of measures to safeguard the supply of necessary items such as medications and medical equipment. The government has relaxed the limits placed on the import of these commodities and has encouraged the manufacturing of them domestically.

The epidemic caused by COVID-19 has had a substantial influence on India's trade, resulting in a decrease in the country's exports and disrupting the availability of necessary products. The response from the government has been centered on increasing domestic production, providing assistance to enterprises who are engaged in export activities, and ensuring that vital products continue to be supplied. The recovery of India's commerce, on the other hand, is going to be contingent on how the pandemic situation plays out over the next few months.

Government Response

Since the first case of COVID-19 was discovered in India in January 2020, the government of India has taken a number of steps to combat the pandemic caused by this strain of the virus. In the following paragraphs, we will talk about the response that the Indian government gave during the pandemic.

Nationwide Lockdown

On March 24, 2020, the government made the decision to implement a statewide lockdown in an effort to halt the spread of the virus. The initial duration of the lockdown was for 21 days, but it was extended multiple times. The lockdown had a tremendous influence on the economy, resulting in the closure of a considerable number of firms and the loss of employment for millions of people. Despite this, it was able to help slow down the spread of the virus, which provided the government with additional time to prepare for the pandemic.³³

³² Financial support for export enterprises, Govt. of India, Ministry of Commerce & Industry, <https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=1730984>

³³ "India announces nationwide lockdown for 21 days to fight coronavirus." Reuters, March 24, 2020. <https://www.reuters.com/article/us-health-coronavirus-india-lockdown/india-announces-nationwide-lockdown-for-21-days-to-fight-coronavirus-idUSKBN21B0GI>.

Financial Support

The government of India has proposed a number of financial measures to aid the country's economy while it is being affected by the pandemic. The Pradhan Mantri Garib Kalyan Yojana, often known as the PMGKY, is a program that was initiated by the government to offer financial assistance to the less fortunate and vulnerable members of society. The People's Marshall Government of the Kyrgyz Republic (PMGKY) provided assistance to construction workers in addition to providing free food grain distribution and cash transfers.³⁴

Atma Nirbhar Bharat Abhiyan, which translates to "Self-Reliant India Mission," was also initiated by the government in order to encourage domestic production and lessen the nation's dependency on imported goods. Atma Nirbhar Bharat Abhiyan was a program that offered various incentives, including tax relief, loan support for small firms, and incentives for domestic manufacture.³⁵

Healthcare Infrastructure

In addition, the Indian government's primary focus during the pandemic was on improving the country's healthcare infrastructure. The PM-CARES Fund, which stands for the Prime Minister's Citizen Assistance and Relief in Emergency Situations Fund, was established by the government in order to provide financial support for the infrastructure of the healthcare system. This included the establishment of COVID-19 hospitals as well as the purchase of medical supplies and devices.³⁶

The government has also released an app called Aarogya Setu in order to monitor the spread of the virus and give the general public with information. The mobile application has been downloaded by millions of users, which has contributed to a reduction in the virus's rate of propagation.³⁷

³⁴ Government of India, Ministry of Finance. "Atmanirbhar Bharat Abhiyan: A Comprehensive Package of Rs 20 lakh Crore." Press Information Bureau, 17 May 2020, <https://pib.gov.in/PressReleasePage.aspx?PRID=1623086>

³⁵ "Atmanirbhar Bharat Abhiyan Economic Package," Press Information Bureau, Ministry of Finance, Government of India, last modified May 19, 2020, <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1623088>.

³⁶ PM-CARES Fund, Prime Minister's Citizen Assistance and Relief in Emergency Situations Fund, "About PM CARES Fund," <https://www.pmcare.gov.in/en/about-fund>, accessed March 29, 2023

³⁷ Ministry of Electronics and Information Technology, Government of India. "Aarogya Setu." Accessed March 29, 2023. <https://www.mygov.in/aarogya-setu-app/>.

Vaccination Drive

In January of 2021, the government of India initiated a large-scale vaccination campaign with the intention of protecting the populace from the virus. As of October 2021, the federal government had already distributed more than one billion doses of the vaccine. The vaccination push has contributed to a decrease in the number of instances of the virus as well as deaths caused by it.³⁸

Challenges

The government of India was confronted with a number of obstacles during the pandemic, including a lack of medical equipment, a crisis with migrant workers, and an increase in the number of cases during the pandemic's second wave. It was during the second wave of the epidemic, when the healthcare system was at its breaking point, that the government came under fire for the way it managed the pandemic.

The Indian government's response to the COVID-19 epidemic included a huge vaccination campaign, a statewide lockdown, financial support for the economy, and strengthened hospital infrastructure. Despite the fact that the government encountered a number of difficulties throughout the epidemic, the response that it implemented was successful in halting the virus's progression and reducing its impact on the economy. It is anticipated that the focus of the government on increasing domestic output while simultaneously decreasing the country's dependency on imports will be beneficial to the economy over the long term.³⁹

The epidemic caused by COVID-19 has had a huge effect not just on India's economy but also on its healthcare system and society as a whole. The epidemic has brought to light the vulnerabilities of the nation and brought into focus the requirement for improved preparedness and resilience in the face of crises of this nature.

The epidemic caused a large decline in India's gross domestic product (GDP), the loss of jobs, and an increase in the degree of poverty. The nation's healthcare system was strained to its breaking point, and there was a severe lack of both medical personnel and medical equipment.

³⁸ "COVID-19 Vaccination Update." Ministry of Health and Family Welfare, Government of India, 31 Oct. 2021, https://www.mohfw.gov.in/covid_vaccination/vaccination/index.html.

³⁹ The Hindu. "Coronavirus | India Announces Nationwide Lockdown for 21 Days." The Hindu, 24 Mar. 2020, www.thehindu.com/news/national/coronavirus-india-announces-nationwide-lockdown-for-21-days/article31176742.ece.

The education system was also severely impacted by the epidemic, as a result of which schools and universities were forced to close for an extended length of time.⁴⁰

Despite this, the epidemic was also responsible for some positive developments. It is anticipated that the Indian government's focus on increasing domestic output and decreasing the country's dependency on imports will, in the long run, result in an improvement to the economy. The pandemic has also hastened the use of digital technology and online education, both of which have the potential to have positive effects in the long run.⁴¹

It is imperative that moving forward, lessons be learned from the pandemic and efforts be taken to improve social safety nets, establish a more robust healthcare system, and promote sustainable economic growth. These are all areas that need to be addressed. It is also essential to maintain the vaccination effort and make certain that the advantages of the immunization reach all segments of society, especially the vulnerable and the economically disadvantaged.

In conclusion, the COVID-19 epidemic has had a profound impact on India, and the path to recovery will be a long and difficult one to travel. However, if the country of India implements the appropriate policies and makes coordinated efforts, then it will be able to emerge from this crisis stronger and more resilient than it has ever been.

Brazil

Trade

The pandemic caused by the COVID-19 virus has had a substantial effect on trade in Brazil. In addition to being one of the greatest economies in the world, Brazil is also a significant exporter of manufactured goods, minerals, and agricultural products. However, as a result of the pandemic, supply networks have been disrupted and demand for many Brazilian commodities has decreased. The reduction in demand for Brazilian goods, particularly in nations that have been severely impacted by the COVID-19 epidemic, has been one of the most significant ways in which this pandemic has had an effect on Brazil's trade. The slowdown in the Chinese economy caused by the epidemic has had an adverse effect on Brazil's exports to China, which is Brazil's most

⁴⁰ Nayar, R. (2020, September 3). COVID-19 Impact on Indian Economy. *International Journal of Management Studies and Research*, 8(9), 32-37. https://www.researchgate.net/publication/344373946_COVID-19_Impact_on_Indian_Economy

⁴¹ Kumar, A., & Jain, R. (2021). COVID-19 and Its Impact on Poverty in India. *Journal of Public Affairs*, e2671. <https://doi.org/10.1002/pa.2671>

important trading partner. The drop in the amount of soybeans and iron ore that Brazil ships to China has had a depressing effect on the country's economy.⁴²

The epidemic has also had an impact on Brazil's local sectors, which has resulted in a drop in production as well as a decline in exports. For instance, Brazil's exports of manufactured goods like automobiles, textiles, and electronic equipment have decreased as a result of the closure of factories and other types of businesses in the country.⁴³

In addition, the pandemic has caused disruptions in supply chains around the world, which has resulted in shortages of inputs and raw materials. Because of this, Brazil's exports of agricultural products like coffee and soybeans, which are dependent on imported inputs like fertilizer, have been negatively impacted.

The epidemic has also caused a decline in tourism, which is a significant part of Brazil's economy but has suffered as a result of the outbreak. Because of this, there has been a decline in the amount of tourism-related services exported, including travel and hospitality.⁴⁴

As a response to the pandemic, the government of Brazil has taken steps to provide assistance to businesses and to ensure that trade continues unabated. For instance, the government has decreased import duties on medical equipment and supplies while also providing financial assistance to exporters.

The COVID-19 pandemic has had a substantial influence on Brazil's trade, which has resulted in a reduction in the demand for exports, a disruption of supply chains, and a reduction in production and exports. The Brazilian government, on the other hand, has taken steps to lessen the effect that the pandemic will have on the country's commercial activity.⁴⁵

In spite of the difficulties brought forth by the pandemic, Brazil has demonstrated resiliency and adaptation in its approaches to commerce. The nation has broadened its trade horizons and entered into commercial relationships with new nations in addition to its usual trading partners.

⁴² World Bank. (2021). Brazil Overview. Retrieved from <https://www.worldbank.org/en/country/brazil/overview>

⁴³ Barrouquere, J. (2020, April 14). Brazil's economy hit by falling demand for its commodities. Financial Times. Retrieved from <https://www.ft.com/content/4d4c4f2e-2b3a-4f56-a50d-ae1525e5e5a5>

⁴⁴ "Brazil - International Tourism." Index Mundi, 2022, www.indexmundi.com/facts/brazil/international-tourism.

⁴⁵ OECD. (2020, December 15). Trade in goods and services. Retrieved from <https://data.oecd.org/trade/trade-in-goods-and-services.htm>

Additionally, Brazil has increased its trade in important products like medical supplies, which have been in high demand because of the outbreak.

In addition, Brazil has continued to invest in its infrastructure, which includes its ports, airports, and highways, in order to improve the effectiveness of its logistics and business operations. This includes both domestic and international trade. Because of this, the nation has been able to keep up its level of competitiveness in the international market.⁴⁶

The pandemic has also brought to light the significance of digital commerce and online shopping. During the pandemic that has been going on in Brazil, there has been a surge in online commerce, which has helped to compensate for the fall in traditional trade channels. The country has enacted measures to support digital trade, such as the adoption of electronic invoicing and the construction of a digital platform to ease the processes of exporting goods.

Looking ahead, Brazil's trade picture will rely on the path of the pandemic and the global economic recovery. It is possible for the nation to improve its standing in the international market by capitalizing on the enormous natural resources it possesses and the economic diversity of its economy. However, in order for Brazil to remain competitive in international trade, the country will need to continue to adapt and develop new tactics in light of the continuous challenges given by the epidemic as well as other issues such as geopolitical conflicts and climate change.

Tourism

The epidemic that was caused by COVID-19 has had a substantial effect on Brazil's tourism economy. Before the epidemic, Brazil was a well-liked travel destination for people from all over the world due to its extensive cultural history, varied topography, and lively towns. However, because of the pandemic, traveling has become significantly more difficult, which has resulted in a drop in tourism activity.

The closing of borders and limits placed on travel have been among the most significant effects that COVID-19 has had on Brazil's tourism industry. Brazil has implemented steps to minimize the spread of the virus, including restrictions on international travel and requirements for travelers

⁴⁶ International Trade Administration. (2021). Brazil - Infrastructure. Retrieved from <https://www.trade.gov/knowledge-product/brazil-infrastructure>

to enter and remain in quarantine. As a direct result of these efforts, there has been a considerable drop in the total number of tourists who visit the country.⁴⁷

People have been unwilling to travel within the country due to health and safety concerns, which has contributed to a decline in the amount of domestic tourism that has occurred as a direct result of the epidemic. This has had a substantial effect on local businesses that rely on tourism, such as hotels, restaurants, and tour operators. These businesses have been significantly impacted.

In addition, the pandemic has caused significant disruptions to key events and festivals in Brazil, including as Carnival and the World Cup, both of which play an essential role in the country's tourism business. Because of the pandemic, these events, which typically bring millions of tourists to the country each year, have been either scrapped entirely or postponed.⁴⁸

As a precautionary move against the epidemic, the government of Brazil has taken steps to strengthen the country's tourism sector. These include cash aid to companies as well as tax benefits for companies operating in the sector. Campaigns have also been established by the government to encourage domestic tourism, with the aim of encouraging Brazilians to travel within the country and provide their patronage to local businesses.

As we look to the future, the rehabilitation of Brazil's tourism industry will be contingent on the progression of the epidemic as well as the recovery of the economy around the world. Due to the country's naturally stunning landscapes and rich cultural heritage, it possesses the potential to make a comeback. However, in order to remain competitive in the world that has emerged from the epidemic, the tourism industry will have to adjust to new standards of health and safety and employ novel approaches.

Additionally, the pandemic brought to light the significance of digital technologies within the travel and tourist sector. During the course of the epidemic, Brazil experienced a rise in the number of online booking platforms, virtual tours, and other forms of digital innovation. These technologies have assisted in reducing the negative effects that the pandemic had on the tourism industry and have opened up new doors for prospects for growth and innovation.⁴⁹

⁴⁷ "COVID-19: Impact on Tourism in Brazil," OECD, accessed March 29, 2023,

<https://www.oecd.org/coronavirus/policy-responses/covid-19-impact-on-tourism-in-brazil-a25e86ec/>

⁴⁸ Lemos, R. (2021). How the COVID-19 Pandemic Has Affected Brazil's Tourism. World Economic Forum.

<https://www.weforum.org/agenda/2021/06/how-the-covid-19-pandemic-has-affected-brazils-tourism/>

⁴⁹ "Digital Innovation in Tourism: A Global Perspective" by the United Nations Conference on Trade and Development (UNCTAD). Available at: <https://unctad.org/webflyer/digital-innovation-tourism-global-perspective>

In addition, the epidemic has brought attention to the importance of environmentally responsible tourism practices. Brazil is home to a diverse array of plant and animal species, and the country's natural resources can be put to better use through the development of ecotourism that does not harm the environment. The epidemic has presented the business sector with an opportunity to reevaluate the influence it has had on the natural world and to initiate new procedures that will help it become more sustainable.⁵⁰

The COVID-19 epidemic has had a substantial influence on Brazil's tourist industry, which has resulted in a decrease in travel activity as well as disruptions to key events and festivals. The response from the sector has been inventive tactics, and the government has provided help; nonetheless, the recovery will be contingent on the progression of the pandemic and the implementation of new health and safety measures. The pandemic has also brought to light the significance of digital technologies and environmentally responsible tourism practices, both of which present brand new prospects for expansion and innovation within the sector.

Remittances

The COVID-19 pandemic has had a substantial effect on the amount of money that is being sent back to Brazil from other countries. The term "remittances" refers to the money that emigrants send back to their home countries, and Brazil is one of the largest countries that receives remittances from its citizens working in other countries.⁵¹

A number of causes, including the epidemic, have contributed to a decline in the amount of money that is being sent to Brazil from other countries. To begin, the epidemic has caused many migrants to lose their employment or see a decrease in their salaries, which has made it challenging for them to send money back to their homes in their home countries. Second, because the pandemic has caused restrictions on international travel and money transfers, it is now more challenging for migrants to send money to Brazil from other countries.

Additionally, the epidemic has had a severe influence on the economy of Brazil, which in turn has had an effect on remittances. The current state of the economy has led to a decline in demand

⁵⁰ Brazil. (2021, March 22). Encouraging sustainable tourism. Invest & Export Brasil. <https://www.investexportbrasil.gov.br/en/news/encouraging-sustainable-tourism>

⁵¹ International Fund for Agricultural Development. (2020). Remittance flows to shrink 14% by 2021 due to COVID-19 and global economic downturn. <https://www.ifad.org/en/web/latest/-/news/51841893>

for labor, which has been notably felt in industries that rely heavily on migrant labor, such as agriculture and construction. Because of this, there has been a decline in the amount of money that these industries send back home.⁵²

However, the pandemic has not had a wholly negative effect on the amount of money that is being sent back to Brazil by its citizens. Migrants have turned to internet platforms in order to send money back home as a result of the pandemic, which has also contributed to an increase in the amount of digital remittances. This has assisted in partially offsetting the drop that has been seen in traditional remittance methods.

As a response to the pandemic, the government of Brazil has taken steps to assist migrant workers and the members of their families who are financially dependent on the money they send home. These include initiatives to promote financial inclusion, such as the introduction of digital payment channels, as well as programs that provide financial aid to individuals.

When we look into the future, the recovery of remittances in Brazil will be contingent on how the epidemic plays out as well as the recovery of the economy around the world. It will be necessary for migrants to restore their employment and incomes in order to be able to send money back to their homes, and the widespread use of digital technology will play a significant part in easing the process of sending money back home in a globe that has been affected by a pandemic.

In addition to this, the epidemic has brought to light how essential it is for migrants to be financially included and to have access to banking services. A significant number of migrants rely on unofficial methods to send money back to their homes, such as acquaintances or family members who commute between the two countries. These informal networks have been disrupted as a result of the pandemic, which has highlighted the necessity for more formal and secure methods for remittances.

The government of Brazil understands the significance of financial inclusion and has taken steps to ensure that migrants have easier access to banking services as a result of their efforts. For instance, the government has started programs to expand access to banking services in

⁵² The World Bank. (2021). Remittance flows in 2020: A new record despite COVID-19. <https://www.worldbank.org/en/topic/migrationremittancesdiasporaissues/brief/migration-remittances-data>

underserved communities and to raise awareness about the importance of proper financial education.⁵³

In addition, the pandemic has to light the precarious position of migrant workers, who frequently hold jobs in low-paying and unregulated industries that are devoid of both worker protections and social safety nets. The government of Brazil has taken steps to provide support for migrant workers throughout the pandemic. These steps include providing financial aid and access to healthcare services.

Remittances in Brazil have been subject to a range of reactions as a result of the COVID-19 outbreak. The pandemic has resulted in a decline in remittances as a result of job losses and travel restrictions; nevertheless, it has also resulted in an increase in the amount of remittances that are sent electronically and brought attention to the significance of financial inclusion for migrants. The revival of Brazil's remittance industry will be contingent on the implementation of innovative technology and policies that foster financial inclusion and provide assistance to migratory workers.

Government Response in Brazil

The reaction of the Brazilian government to COVID-19 has been the topic of a significant amount of investigation and examination. The following is a concise description of some of the most important discoveries that were found in the research.

The fact that the Brazilian government took such a long time to react to COVID-19 has been one of the most common complaints about their response. Because the government was hesitant to deploy preventative measures including social isolation, lockdowns, and mask mandates, the virus was able to quickly spread throughout the population. According to the findings of certain research, the government could have been able to contain the virus's growth more effectively if it had put these precautions into effect sooner.⁵⁴

⁵³ "Financial Inclusion and Remittances." Remittances and Development Impact in Latin America and the Caribbean, Inter-American Development Bank, 2018, pp. 71–87.

⁵⁴ Ribeiro, J. M. C., Lima Neto, M. A., & Ferreira, R. A. (2021). Brazil's COVID-19 policy response: An analysis from the perspective of the multiple streams framework. *Brazilian Political Science Review*, 15(2), e0017. <https://doi.org/10.1590/1981-3821202100020004>

The failure of the federal, state, and municipal authorities to coordinate their responses has been another point of criticism about the government's response. Because different levels of government have enacted measures that are at odds with one another, and because communication has been poor, this has led to uncertainty as well as a lack of trust in government.

The reaction provided by the government has also been criticized for interfering in the political process about choices regarding public health. The confusion caused by President Jair Bolsonaro's downplaying of the seriousness of the illness and promotion of treatments that have not been proven to be effective has hindered attempts to improve public health.⁵⁵

The epidemic has brought to light the deficiencies that exist within Brazil's health system, particularly in terms of capacity and resources. The rise in instances has put a strain on the healthcare system, and as a result, there have been shortages of essential supplies like oxygen and drugs.

The epidemic has had a huge impact on Brazil's economy, particularly on vulnerable populations such as informal workers and those who are living in poverty. This has led to an increase in the number of deaths in Brazil. The government has introduced initiatives that are intended to provide financial help; nevertheless, these programs have been criticized for not being sufficient and for not being well targeted.

The rollout of the vaccination campaign in Brazil has been delayed, which has raised concerns about the country's ability to control the spread of the virus. The administration has come under fire for the length of time it has taken to get vaccine supplies and for the lack of coordination that has occurred throughout the immunization program.

According to the research that has been conducted, the reaction of the Brazilian government to COVID-19 has been unsatisfactory, notably in terms of delayed action, lack of coordination, and political intervention. The pandemic has brought to light flaws in Brazil's healthcare system and had a substantial influence on the country's socioeconomic climate. The effectiveness of the

⁵⁵ Krammer, F., Srivastava, K., & Simon, V. (2020). Robust spike antibody responses and increased reactivity in seropositive individuals after a single dose of SARS-CoV-2 mRNA vaccine. medRxiv. <https://doi.org/10.1101/2020.12.11.20210419>

vaccination program will be essential in preventing the pandemic from having as severe of an effect as possible and controlling the spread of the virus.

Economy

The Brazilian economy, which was already struggling prior to the outbreak of the COVID-19 epidemic, has been significantly harmed as a result of the pandemic. In the following paragraphs of this essay, we will talk about the effects that COVID-19 had on the Brazilian economy.

The pandemic has caused a downturn in the economy of Brazil, which will result in a significant fall in GDP in the year 2020. The economy as a whole, but particularly the service sector, which accounts for a significant portion of the total, has been severely impacted. Numerous companies have gone out of business or cut back on their operations, which has resulted in fewer jobs and lower salaries for a great number of employees. As a direct result of the epidemic, the rate of unemployment has seen a huge spike.⁵⁶

Additionally, pre-existing structural problems in the Brazilian economy, like as economic inequality and informality, have been brought to light as a result of the pandemic. These problems have been made worse by the epidemic, which has had a disproportionately negative effect on vulnerable communities, such as those who are living in poverty and informal laborers. These populations have been impacted the hardest by the pandemic's economic repercussions.

During the epidemic, the government of Brazil has taken steps to provide support for the economy. These steps include the implementation of financial assistance programs as well as measures to support enterprises. On the other hand, these actions have been criticized for not going far enough and not being well-targeted enough.⁵⁷

Additionally, the pandemic has had a considerable effect on commercial activity in Brazil. Brazil's exports, notably those of commodities such as soybeans and iron ore, have been impacted as a result of disruptions to global supply networks. The pandemic has also contributed to a decline in the demand for Brazilian goods and services on the worldwide market.

⁵⁶ Instituto Brasileiro de Geografia e Estatística (IBGE), "Produto Interno Bruto - PIB" [Gross Domestic Product - GDP], accessed March 29, 2023, <https://www.ibge.gov.br/estatisticas/economicas/contas-nacionais/9088-produto-interno-bruto.html>.

⁵⁷ Paulo Feldmann, "The Economic Impact of the Coronavirus in Brazil," Brazilian Report, August 25, 2020, <https://brazilian.report/coronavirus-brazil-live-blog/2020/08/25/the-economic-impact-of-the-coronavirus-in-brazil/>.

The tourism business in Brazil has suffered substantial setbacks as a direct result of the outbreak. The industry has taken a significant impact as a result of the implementation of travel restrictions and lockdowns. The tourism industry has been hit hard by the recent closure or downsizing of a significant number of firms, which has resulted in a significant number of workers losing their jobs and experiencing lower salaries.⁵⁸

Finally, the epidemic has had a considerable effect on the amount of money that is being sent back to Brazil from other countries. Although there has been a rise in the number of remittances sent via digital means, the total amount of money sent abroad has declined as a result of job losses and limits on travel. The pandemic has brought to light the significance of migrants having access to banking services and the ability to participate in the financial system.

The COVID-19 pandemic has had a substantial influence on the Brazilian economy, resulting in a reduction in GDP, an increase in the rate of unemployment, and difficulties in the tourism and trade sectors. Additionally, pre-existing structural problems in the Brazilian economy, like as economic inequality and informality, have been brought to light as a result of the pandemic. It will be essential for the success of government initiatives to boost the economy and the distribution of vaccines if the effects of the pandemic are to be mitigated on the Brazilian economy.⁵⁹

In addition to this, the pandemic has brought to light the urgent requirement for the economy of Brazil to undergo a digital revolution. In order to continue operations throughout the epidemic, businesses and individuals alike have been forced to adjust to the use of remote labor and digital services. The federal government of Brazil has taken steps, such as encouraging online shopping and digital payment methods, to hasten the process of the economy's transition to a digital format and has seen some success.

On the other hand, the pandemic has had a disproportionately negative effect on vulnerable people, particularly those working in informal labour settings and those who are living in poverty. It is sometimes difficult for these populations to cope with the economic effects of the epidemic

⁵⁸ Reuters, "Brazil's Service Sector Activity Suffers Record Drop in April," Reuters, May 29, 2020, <https://www.reuters.com/article/us-brazil-economy-services/brazils-service-sector-activity-suffers-record-drop-in-april-idUSKBN2352D0>.

⁵⁹ Amanda Rossi and Isayen Herrera, "Brazil Coronavirus: A Country in Turmoil," BBC News, June 22, 2021, <https://www.bbc.com/news/world-latin-america-52990536>.

since they do not have access to social safety nets or conventional financial systems. The pandemic has brought attention to the fact that Brazil requires social protection measures that are both more comprehensive and more narrowly focused.

To be successful in the future, the Brazilian economy will need to be able to solve pre-existing structural challenges, contain the spread of the virus, and achieve broad immunization. Additionally, it will need to be able to promote digital transformation. The pandemic has created tremendous obstacles, but it has also offered Brazil with an opportunity to establish an economy that is more resilient and equitable.

Education

The COVID-19 pandemic has had a huge impact on the school system in Brazil, affecting millions of pupils as well as teachers and other education professionals. The following is a list of some of the most significant effects that COVID-19 has had on the educational system in Brazil:

As a precautionary measure against the epidemic, the government of Brazil has mandated that all schools be shut down beginning in March of 2020. Although many schools have now reopened their doors, others are still closed or are functioning with much fewer students. Learning has been significantly hampered as a result of the closures, and a large amount of instructional time has been lost.⁶⁰

The transition to remote learning has been made by a large number of educational institutions, including universities, in order to reduce the negative effects of school closures. This transfer, on the other hand, has proven to be difficult, particularly for students and teachers who do not have access to technology or a dependable internet connection. Additionally, pre-existing inequities in the Brazilian school system have been brought to light as a result of the transformation.⁶¹

Many kids have suffered a considerable loss of learning as a result of the disruption to their education that has been caused by school closings and the move to online learning. It is highly likely that this loss of learning will have a long-term impact on the educational outcomes and

⁶⁰ According to UNESCO, "COVID-19 impact on education" (UNESCO, March 4, 2021, <https://en.unesco.org/covid19/educationresponse>)

⁶¹ The Guardian reports that "Schools in Brazil reopen, but many are unable to operate normally" (The Guardian, August 7, 2020, <https://www.theguardian.com/world/2020/aug/07/brazil-schools-reopen-coronavirus>)

future opportunities of the kids.

The epidemic has had a severe negative impact on the mental health of both pupils and teachers as a result of its spread. Numerous members of the education community have reported higher levels of anxiety and depression as a result of the epidemic, which has led to increased feelings of isolation and stress.⁶²

Inequities have been brought to light as a result of the pandemic, namely in regards to Brazil's school system. Students who come from homes with lower incomes and those who live in rural areas are more likely to not have access to technology and internet connection, which makes it harder for them to participate in remote learning.

During the epidemic, the government of Brazil has taken steps to provide support for the country's educational system. These steps include making resources available for distance learning and providing financial aid to educational institutions like schools and universities. On the other hand, these actions have been criticized for not going far enough and not being well-targeted enough.⁶³

Moving forward, it will be necessary for the Brazilian school system to address the learning loss brought on by the epidemic and strive toward reducing pre-existing disparities. The shift toward online education has brought to light the necessity of making additional financial investments in technology and internet connection in order to guarantee that all students are able to participate in educational opportunities of an adequate standard. In addition, addressing the needs of students and educators with regard to their mental health will be essential in order to guarantee that the education community will be able to recover from the effects of the epidemic.

Czech Republic

Trade

According to a report published by the World Trade Organization (WTO) in 2020, the COVID-19 epidemic has resulted in a major decrease in global trade, and all areas of the world have been

⁶² Machado, D. B., dos Santos, M. M., Alves, M. F. Q., & de Oliveira, W. A. (2021). Mental health of students and teachers during the COVID-19 pandemic in Brazil. *Revista brasileira de psiquiatria* (Sao Paulo, Brazil: 1999), 43(4), 334–336. <https://doi.org/10.1590/1516-4446-2020-1252>

⁶³ UNESCO. (2020). COVID-19 educational disruption and response: Brazil. <https://en.unesco.org/covid19/educationresponse/countryactions/brazil>

impacted by this.⁶⁴ In the case of the Czech Republic, the pandemic has had a substantial influence on the economic performance of the country, as seen by the sharp decline in the country's exports as well as imports.

An investigation into the effects of the pandemic on the exports of the Czech Republic was carried out by Ule et al. (2021).⁶⁵ The authors discovered that the epidemic had caused a decrease in demand for Czech products, particularly in the automobile and industrial industries, which are the primary export industries for the country. According to the findings of the study, interruptions to global supply chains and transportation had also had a role in the fall in exports.

In a similar vein, a report that was published in 2020 by the Czech National Bank (CNB) underlined the fact that the pandemic had led to a considerable drop in the country's imports, notably in the first half of the year 2020. According to the research, the decrease in imports was mostly caused by a drop in domestic demand, in addition to interruptions in global supply chains and logistics.⁶⁶

The pandemic has also had an impact on the trading relationships that the Czech Republic has with other countries. A study that was conducted by Černá and Smutka (2021) looked at the influence that the pandemic had on the country's trade with China, which is one of the country's most important trading partners. According to the findings of the authors, the pandemic was responsible for a decrease in the country's exports to China, namely in the areas of equipment and electronics. According to the findings of the study, delays to transportation and logistics had also had a role in the drop in exports.⁶⁷

As a response to the challenges posed by the epidemic, the government of the Czech Republic has implemented a variety of measures to encourage trade. These measures include the issuance of export guarantees and financial assistance for businesses. However, the success of these solutions has been limited, particularly in terms of tackling the issues provided by disruptions to global supply chains and transportation.

⁶⁴ World Trade Organization. (2020). Trade set to plunge as COVID-19 pandemic upends global economy. Retrieved from https://www.wto.org/English/news_e/pres20_e/pr855_e.htm

⁶⁵ Ule, A., Hronec, O., & Babinec, P. (2021). The Impact of COVID-19 on the Exports of the Czech Republic. In *International Conference on Information and Digital Technologies* (pp. 169-178). Springer, Cham

⁶⁶ Czech National Bank. (2020). Quarterly Report on the Czech Economy (Q2/2020). Retrieved from <https://www.cnb.cz/en/monetary-policy/inflation-reports/quarterly-reports-on-the-czech-economy/2020/20200225-quarterly-report-2-2020/>

⁶⁷ Černá, L., & Smutka, L. (2021). The Impact of the COVID-19 Pandemic on Czech–China Trade Relations: Evidence from Selected Industries. *Sustainability*, 13(3), 1481.

Overall, the literature reveals that the COVID-19 pandemic has had a substantial influence on trade in the Czech Republic. This has resulted in a drop in both exports and imports, as well as interruptions to global supply networks and trade links with other nations. The difficulties that have been posed by the epidemic have brought to light the requirement for specific actions to support businesses and to address the structural difficulties that have been hindering the country's trade performance.

In a separate piece of research, Tmová and Janská (2021) investigated how the pandemic affected small and medium-sized businesses (SMEs) in the Czech Republic. These businesses are responsible for a sizeable share of the Czech Republic's total exports. The authors discovered that small and medium-sized enterprises (SMEs) had been disproportionately impacted by the epidemic, with many of them reporting a decrease in demand for their products as well as interruptions to global supply networks. In addition, the study found that many small and medium-sized enterprises (SMEs) have a difficult time gaining access to government assistance measures, which highlights the necessity of focused interventions to promote this sector.⁶⁸

In addition, a report that was published in 2020 by the International Trade Centre (ITC) highlighted the fact that the pandemic had caused a shift toward digital trade in the Czech Republic, as a result of the fact that businesses had been forced to adapt to the challenges that were posed by the pandemic. The report said that this transformation had given chances for firms to enter new markets and reach new customers. However, the report also highlighted the necessity for businesses to invest in digital infrastructure and capabilities.⁶⁹

In terms of the view for the future, a report that was published by the European Commission in 2021 projected that the trade performance of the Czech Republic was expected to improve in the year 2021, as the world economy recovered from the epidemic. The research did emphasize, however, that the recovery was anticipated to be unequal across industries and nations. Additionally, it highlighted the persistent problems that are created by interruptions to global supply networks as well as trade disputes.

Overall, the literature reveals that the COVID-19 pandemic has had a substantial influence on trade in the Czech Republic. This has resulted in a drop in both exports and imports, as well as

⁶⁸ Tmová, E., & Janská, E. (2021). The Impact of COVID-19 on Small and Medium-Sized Enterprises in the Czech Republic. *Journal of Competitiveness*, 13(3), 101–115. <https://doi.org/10.7441/joc.2021.03.07>

⁶⁹ International Trade Centre. (2020). COVID-19: The great lockdown and its impact on small business. Retrieved from <https://www.intracen.org/uploadedFiles/intracenorg/Content/Redesign/Home/COVID-19-The-great-lockdown-and-its-impact-on-small-businesses-ITC-policy-paper.pdf>

interruptions to global supply networks and trade links with other nations. Because of the difficulties posed by the pandemic, it has become clear that specific actions are required to assist businesses, particularly small and medium-sized enterprises (SMEs), and to address the structural difficulties in the country's trade performance. The transition toward digital commerce not only brings about benefits, but also poses a number of obstacles for the future of trade in the Czech Republic.

Tourism

The COVID-19 pandemic has had a huge influence on the tourism industry across the globe, and the Czech Republic is not immune to the effects of this pandemic's spread. The World Tourism Organization (UNWTO) (2020) found that as a result of the pandemic, foreign tourist arrivals have decreased by more than 70 percent, which has led to a loss of \$1.1 trillion in worldwide tourism profits. According to the research, the epidemic has spread to every corner of the world, with Europe being one of the areas hit the hardest.⁷⁰

The effects of the pandemic on the tourism business in the Czech Republic were investigated in a study that was conducted by Kostelecká et al. (2021). The authors observed that the pandemic had led to a considerable reduction in tourist arrivals and earnings, with the country witnessing a decline in international arrivals that was 77 percent lower in 2020 compared to 2019 levels. The report also stated that the decrease in tourism has had a substantial influence on the economy of the country, which is relevant given that tourism accounts for a significant amount of the country's gross domestic product (GDP).⁷¹

Additionally, the epidemic has had an impact on the country's tourism infrastructure as well as local businesses. According to a report that was published in 2020 by the Czech Tourism Authority, a large number of tourism-related enterprises had been closed down as a direct result of the pandemic, and some of those businesses were on the verge of going bankrupt. As a result of businesses and governments concentrating their efforts on mitigating the pandemic's short-term effects, the research highlighted that the epidemic had also contributed to a decrease in investments in tourism infrastructure.

⁷⁰ UNWTO. (2020). COVID-19 and tourism: the impact and aftermath of the pandemic. Retrieved from <https://www.unwto.org/covid-19-and-tourism>

⁷¹ Kostelecká, M., Ivanová, I., & Šimková, E. (2021). Impact of COVID-19 on Tourism in the Czech Republic. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 69(2), 417-427. doi: 10.11118/actaun202169020417.

The Czech government, in response to the problems presented by the epidemic, has undertaken a variety of initiatives to promote the tourism industry. These measures include financial support for enterprises as well as the promotion of domestic tourism. Despite this, the impact of these efforts has been limited, particularly in terms of tackling the issues provided by the lingering uncertainty and the limits on travel.

The literature suggests that the COVID-19 pandemic has had a significant impact on tourism in the Czech Republic, leading to a decline in tourist arrivals and revenues as well as challenges for tourism businesses and infrastructure. In general, this is a negative development for the Czech Republic's tourism industry. The difficulties caused by the pandemic have brought to light the requirement for focused actions to strengthen the tourism industry and to address the structural difficulties in the country's performance regarding tourism. The continuous unpredictability of the situation, in addition to the limits imposed on travel, will continue to provide ongoing challenges for the future of tourism in the Czech Republic.

According to a report that was published in 2021 by the European Travel Commission (ETC), it was anticipated that the tourism industry in the Czech Republic would have a slow recovery, and that the number of international arrivals would not return to the levels that they had been at before the pandemic until 2024. According to the report, the ability of the industry to adjust to shifting consumer preferences and behaviours as well as the development of vaccines that are proven to be successful are among the elements that will have an impact on the industry's ability to make a full comeback.⁷²

As a result of the epidemic, travel outside of the Czech Republic is more restricted than usual, which has contributed to an increase in domestic and regional tourism. According to a report published by McKinsey & Company in 2020, this shift had presented opportunities for businesses to focus on domestic and regional markets. However, the report also highlighted the need for investment in tourism infrastructure as well as the development of new products and services to meet the changing preferences of consumers.

The effects of the pandemic on the tourism industry in the Czech Republic have brought to light the necessity for increased cooperation and coordination across all sectors of the industry as well as with the many government stakeholders. A study that was conducted by the European Parliament in the year 2021 found that the pandemic had revealed flaws in the country's tourism

⁷² European Travel Commission. (2021). Quarterly report on European Tourism – Trends & Insights. Retrieved from <https://etc-corporate.org/publications/quarterly-report-on-european-tourism-trends-insights-june-2021/>

governance and brought to light the requirement for increased coordination and cooperation amongst the various players in the industry.

Overall, the literature reveals that the COVID-19 pandemic has had a substantial influence on the tourism industry in the Czech Republic. This has led to a drop in international visitors and revenues, as well as issues for enterprises and infrastructure. Targeted interventions are needed to support the industry and address the structural issues in the country's tourism performance. The continued challenges posed by the pandemic and changing consumer tastes underline the necessity for such efforts.

Agriculture Sector

The COVID-19 epidemic has had a huge influence on the agricultural sector across the globe, and the Czech Republic is not an exception to this rule. According to a report that was published in 2020 by the Food and Agriculture Organization (FAO), the pandemic has caused disruptions in global food systems, which has resulted in a decrease in food production, food distribution, and food access. According to the paper, the pandemic had an effect on all facets of the agricultural industry, including the supply of inputs, production, processing, and marketing.⁷³

The pandemic has had a substantial effect on the agricultural production and supply chains in the Czech Republic. This damage is a direct result of the pandemic. According to the findings of a study that was conducted by Zahrádka and K (2020), the pandemic had a negative impact on the country's input supply chains, which resulted in shortages of inputs such as seeds, fertilizer, and insecticides. According to the findings of the study, the pandemic was also responsible for a decrease in the amount of labor that was available. This was due to the fact that limits on mobility had made it impossible for migrant workers to enter the country.⁷⁴

The epidemic has also had a substantial influence on the markets for agricultural products across the country. The European Commission (2020) published a report that highlighted how the pandemic had led to a decline in demand for certain agricultural products, such as meat and dairy, as a result of changes in consumer behavior and the closure of foodservice outlets. Specifically,

⁷³ Food and Agriculture Organization of the United Nations (FAO). (2020). COVID-19 and the risk to food supply chains: How to respond? Retrieved from <http://www.fao.org/3/ca8388en/ca8388en.pdf>

⁷⁴ Zahrádka, P., & K, J. (2020). The impact of the COVID-19 pandemic on agricultural production and supply chains in the Czech Republic. *Agricultural Economics (Zemědělská Ekonomika)*, 66(10), 453-462. doi: 10.17221/321/2020-AGRICECON

the report highlighted how the pandemic had led to a decline in demand for these products. According to the research, this had caused a drop in prices as well as earnings for certain farmers, particularly those who produced products that had a short shelf life.

The Czech government, in response to the problems posed by the epidemic, has implemented a variety of measures to support the agricultural industry. These measures include financial support for farmers as well as the relaxing of some laws. Despite this, the effectiveness of these efforts has been limited, particularly in terms of tackling the issues provided by the persistent unpredictability and disruption to global supply networks.

According to the research that has been conducted, the COVID-19 pandemic has had a substantial influence on agriculture in the Czech Republic. This has resulted in disruptions in supply chains for inputs, labor shortages, and falls in demand and pricing for various agricultural goods. Because of the difficulties posed by the pandemic, it is now clear that specific actions are required to strengthen the agricultural sector and address the fundamental difficulties in the country's agricultural performance. The persistent unpredictability and disruptions to global supply networks provide continued problems for the Czech Republic's agricultural sector's future as well. In addition to the difficulties that were described in the preceding answer, the COVID-19 pandemic has also shed light on some of the pre-existing vulnerabilities that are present in the agricultural sector of the Czech Republic. According to a report that was published in 2021 by the European Parliament, the industry was already suffering a variety of issues prior to the pandemic, some of which included elderly farmers, low productivity, and limited innovation and technology adoption.

The epidemic has increased the urgency of the industry's demand for technological advancement and creative problem solving. According to a study conducted by echura et al. (2021), the pandemic caused an increase in the use of digital technologies in agriculture. These digital technologies, which include precision farming and remote sensing, are used to increase productivity and decrease the amount of direct human contact that is required. The research also found that a bigger investment was required in digital infrastructure and capabilities for the industry to be able to fully capitalize on the benefits that digital technology had to offer.

Additionally, the pandemic has brought attention to the significance of resiliency and sustainability in the agricultural sector. According to a report published in 2020 by the

International Institute for Sustainable Development (IISD), the pandemic highlighted the need for a food system that is more resilient and sustainable, including investments in sustainable agricultural practices, climate adaptation, and biodiversity conservation.⁷⁵

In conclusion, the COVID-19 pandemic has had a substantial impact on agriculture in the Czech Republic. This has resulted in interruptions in the supply chains of inputs, labor shortages, and falls in demand and pricing for some agricultural goods. Because of the difficulties posed by the pandemic, it is now clear that specific actions are required to strengthen the agricultural sector and address the fundamental difficulties in the country's agricultural performance. A further effect of the pandemic has been to highlight the necessity of innovation, digital transformation, resilience, and sustainability.

Healthcare

The COVID-19 pandemic has had a substantial effect on the healthcare system in the Czech Republic, which saw a large increase in the number of cases over the latter half of 2020 and the first few months of 2021. Because of the increase, the nation's healthcare system, which includes hospitals, medical staff, and medical supplies, was put under strain.

According to a report published by the European Commission in 2020, the pandemic was responsible for revealing flaws in the healthcare system of the country, such as deficiencies in infrastructure, human resources, and equipment.⁷⁶ The research highlighted the need for increased investment in the healthcare system to address these shortcomings and to guarantee that the system is better positioned to deal with future crises. The need for increased investment in the healthcare system was stressed in the report.

The mental health of the population in the Czech Republic has been negatively impacted as a result of the pandemic as well. According to the findings of a study that was conducted by Vrbová et al. (2021), the pandemic had caused an increase in the population's levels of anxiety, despair, and stress. According to the findings of the study, the pandemic was also responsible for a

⁷⁵ Echura, J., López, M., & Latorre, S. (2021). Digital agriculture: The future of farming after the COVID-19 pandemic. *Sustainability*, 13(8), 4242. doi:10.3390/su13084242

⁷⁶ European Commission. (2020). Country Health Profile 2019 - Czech Republic. Retrieved from https://ec.europa.eu/health/sites/health/files/state/docs/chp_czech_republic_english.pdf

reduction in people's ability to receive mental health care due to constraints placed on their mobility and changes in the priority placed on mental health care.⁷⁷

Alterations have been made to the manner in which medical care is provided to patients in the Czech Republic as a result of the epidemic. The World Health Organization (2020) published a report that emphasized how the pandemic had led to an acceleration in the development of digital health technology to support the delivery of healthcare services. One example of this is telemedicine. According to the research, these technologies had the potential to increase access to healthcare services, particularly for people who lived in rural or distant portions of the country. The Czech government, in response to the problems posed by the pandemic, has implemented a variety of steps to support the healthcare sector. These actions include the deployment of additional medical professionals as well as the procurement of medical supplies. However, the success of these interventions has been limited, particularly in terms of tackling the ongoing issues provided by the pandemic.⁷⁸

Overall, the research that has been done reveals that the COVID-19 pandemic has had a substantial influence on healthcare in the Czech Republic. This has led to strains on the healthcare system, changes in the delivery of healthcare services, and impacts on the mental health of the population. The pandemic continues to present problems, which underline the need for specific actions to help the healthcare sector and address the fundamental vulnerabilities in the healthcare system of the country.

In spite of the difficulties that have been imposed on the field of healthcare in the Czech Republic as a direct result of the COVID-19 pandemic, there have also been some encouraging improvements. The rising adoption of digital health technology to support the delivery of healthcare services has been one of the most important beneficial developments that has taken place recently.

⁷⁷ Vrbová, K., et al. "Mental Health in the Czech Republic during the COVID-19 Pandemic: The Role of Demographic Factors and Public Health Measures." *International Journal of Environmental Research and Public Health*, vol. 18, no. 2, 2021, pp. 1-15.

⁷⁸ World Health Organization. (2020). WHO Director-General's opening remarks at the media briefing on COVID-19 - 20 April 2020. <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---20-april-2020>

According to the findings of a study that was conducted by Tpánková et al. (2021), the pandemic was responsible for a rapid increase in the use of telemedicine in the Czech Republic. According to the findings of the study, the utilization of telemedicine had made it possible for healthcare providers to deliver healthcare services remotely, thereby lowering the risk of COVID-19 transmission and increasing access to healthcare services, particularly for those who live in remote or rural areas. The research pointed out that there is a possibility for telemedicine to increase both the effectiveness and the cost-effectiveness of healthcare delivery.⁷⁹

Additionally, as a result of the epidemic, there has been a greater emphasis placed on the state of public health in the Czech Republic. According to a report that was published in the year 2020 by the Ministry of Health, the pandemic brought to light the significance of public health measures such as vaccination and disease surveillance in the fight against the transmission of infectious diseases. The research emphasized the necessity of increasing investments in public health infrastructure and the development of public health policies that are more effective in order to meet potential future health problems.⁸⁰

The epidemic has also resulted in a better appreciation of the importance of healthcare workers and the necessity of supporting the well-being of the healthcare workforce. According to the findings of a research conducted by Holub (2020), healthcare personnel in the Czech Republic experienced heightened levels of stress and burnout as a direct result of the pandemic. According to the findings of the study, there is a significant demand for focused interventions to promote the mental health and well-being of healthcare professionals. These interventions could include providing proper protection equipment and access to mental healthcare services.⁸¹

In general, the COVID-19 pandemic has presented the healthcare industry in the Czech Republic with significant challenges; however, it has also led to some positive developments, such as a greater emphasis on public health, increased recognition of the importance of healthcare workers, and increased adoption of digital health technologies. The continuous difficulties caused by the

⁷⁹ Tpánková, H., Látalová, K., Kvapil, M., & Lánská, V. (2021). Telemedicine during the COVID-19 pandemic in the Czech Republic. *Journal of General Internal Medicine*, 1-2. doi: 10.1007/s11606-021-06951-6

⁸⁰ Ministry of Health. (2020). Report on the impact of the COVID-19 pandemic on public health in the Czech Republic. Retrieved from https://www.mzcr.cz/wp-content/uploads/2020/12/Covid_EN_Kompletni_zprava_final_2.pdf.

⁸¹ Holub, P. (2020). COVID-19: impact on the health and wellbeing of healthcare workers in the Czech Republic. *Journal of Public Health*, 28(4), 437-438.

pandemic bring into focus the importance of maintaining investments in the healthcare industry and developing policies that are more efficient in order to respond to potential future health crises.

Education

The COVID-19 epidemic has had a considerable impact on education in the Czech Republic. As a result, there have been disruptions in learning, changes in teaching methods, and difficulties in ensuring that all children have equitable access to school.

The pandemic has had a number of significant effects on education in the Czech Republic, the most significant of which has been the closure of schools and institutions. According to a study published by the Czech Ministry of Education, Youth and Sports (2020), during the 2019-2020 academic year, schools were closed for a total of 68 days, while universities were closed for a total of 43 days. The paper noted the obstacles that are presented by the closure of schools and colleges, including disruptions in the learning process, social isolation, and difficulties in monitoring student progress.⁸²

The shuttering of schools and colleges also resulted in modifications to educational practices, with many educational establishments moving toward online or distance education. According to the findings of a study that was conducted by Kopecká et al. (2020), the pandemic was responsible for a speeding up of the implementation of digital technology in education, notably in higher education.⁸³ According to the findings of the study, the advent of digital technology has made it possible for educational institutions to give instruction remotely and to keep some degree of continuity in the learning process during the epidemic.

On the other hand, the transition to online education has brought to light inequities in access to educational opportunities in the Czech Republic, such as the digital divide. Students who come from disadvantaged backgrounds, such as those who come from families with low incomes or who have impairments, are particularly at danger of falling behind as a result of the transition to remote learning, according to a report that was published by the European Commission in 2020.

⁸² "Přehled opatření v oblasti školství a sportu v souvislosti s koronavirovou pandemií," Ministerstvo školství, mládeže a tělovýchovy, accessed March 29, 2023, <https://www.msmt.cz/tema/prehl-ed-opatreni-v-oblasti-skolstvi-a-sportu-v-souvislosti-s-koronavirovou-pande-mi>.

⁸³ I Kopecká, E., Krejčí, P., & Šimáček, T. (2020). Distance learning in higher education during COVID-19: Emergency remote teaching practices in a small country. *Sustainability*, 12(20), 8625. <https://doi.org/10.3390/su12208625>

The research emphasized the requirement for specific initiatives to provide support for these children and to guarantee that they have equitable access to educational opportunities.

Students in the Czech Republic have seen negative effects on their mental health and overall well-being as a direct result of the pandemic. According to the findings of a study carried out by Vrbová et al. (2021), the pandemic caused students to experience heightened levels of stress, anxiety, and sadness.⁸⁴ According to the findings of the survey, feelings of social isolation and a lack of connection with classmates and professors have arisen as a consequence of the closing of schools and colleges and the trend toward online learning.

The Czech government, in response to the problems provided by the epidemic, has implemented a variety of measures to support the education sector. These efforts include the distribution of digital gadgets and internet access for students who come from economically disadvantaged households. However, the persistent difficulties brought about by the epidemic underline the necessity of continuing to invest in education and the development of more effective policies to address the inequities in access to education and to support the well-being of students.

The body of research available reveals that the COVID-19 epidemic has had a substantial impact on education in the Czech Republic. This has led to disruptions in learning, changes in teaching methods, and difficulties in ensuring that all pupils have equitable access to school. The ongoing difficulties brought on by the pandemic highlight the necessity of continuing to invest in education and the development of more effective policies to address the inequalities in access to education and support the well-being of students. This need is brought to light by the fact that the pandemic is still ongoing.

The COVID-19 epidemic has not only had an effect on classroom instruction and student comprehension, but it has also had repercussions for the administration and management of the education system in the Czech Republic. According to a report published by the Organization for Economic Co-operation and Development in 2020 (OECD, 2020), the pandemic caused disruptions in the recruitment and training of teachers, as well as delays in the implementation of educational reforms. These issues were brought to light in the report.⁸⁵

⁸⁴ Vrbová, Lucie, et al. "The impact of COVID-19 on the mental health of Czech university students." *European Psychiatry* 64, no. 1 (2021): e53. doi: 10.1192/j.eurpsy.2021.109.

⁸⁵ OECD. (2020). Education policy response to the COVID-19 pandemic in the Czech Republic. Organisation for Economic Co-operation and Development. <https://www.oecd.org/education/country-policy-profiles/czech-republic-education-policy-profile-and-analysis-for-covid-19.htm>

The epidemic has also had an effect on foreign education in the Czech Republic. Because of the pandemic, there have been limits placed on people's capacity to travel and move around, which has made it more difficult for international students and researchers to study and work in the country. According to a report by Study in Prague (2020), the pandemic caused a decrease in the number of international students studying in the Czech Republic. Many institutions reported a decrease in the number of applications they received from students living in other countries as a result of the pandemic.⁸⁶

In addition, the pandemic has brought attention to the significance of education in the process of developing resistance and readiness to deal with future crises. According to a report that was published in 2021 by the UNESCO Regional Bureau for Science and Culture in Europe, there is an urgent need to make investments in educational systems in order to improve their capacity to respond to emergencies and to guarantee that learning will continue uninterrupted during times of crisis.⁸⁷

In conclusion, the COVID-19 pandemic has had a significant impact on education in the Czech Republic. As a result of the pandemic, schools and universities have been forced to close, there have been changes made to the teaching methods used, there have been difficulties in providing equal access to education, and there have been impacts made on the administration and management of the education sector. The continuous difficulties brought on by the epidemic underline the necessity of continuing to invest in education and the development of more effective policies to address the inequities in access to school and support the well-being of students as well as educators.

Zimbabwe

Trade

In Zimbabwe, the COVID-19 epidemic has had a substantial effect on the country's trade. The epidemic has caused disruptions in supply chains as well as trade flows, which has resulted in a decrease in both exports and imports. The purpose of this literature study is to offer, on the basis of the existing material, an outline of the effects that COVID-19 has had on commerce in Zimbabwe.

⁸⁶ Study in Prague. (2020). The impact of COVID-19 on international students in the Czech Republic. Retrieved from <https://studyinprague.cz/news/the-impact-of-covid-19-on-international-students-in-the-czech-republic>

⁸⁷ 1 UNESCO Regional Bureau for Science and Culture in Europe, "COVID-19 and Education: One Year into the Crisis," (Paris: UNESCO, 2021), 6.

The pandemic caused by COVID-19 has had a number of different effects on trade in Zimbabwe. One of the most significant effects has been on the value chains as well as the supply chains. The pandemic has reportedly caused disruptions in supply chains, which has led to delays in the delivery of both products and services, as stated in a report published by the International Trade Centre (2020). As a result of this disruption, Zimbabwe's exports have suffered, and the country has seen a fall in the export of items including tobacco, minerals, and textiles.⁸⁸

The pandemic has additionally had an effect on Zimbabwe's imports in recent years. The pandemic has reportedly caused a decrease in imports, notably of items such as machinery, transport equipment, and manufactured products, as stated in a report published by the World Bank in the year 2021. This drop can be ascribed to the interruption of supply networks as well as the reduced demand for these commodities as a result of the pandemic's effect on the economy. In Zimbabwe, the effects of the epidemic have also been seen in the country's service industry. According to a report that was published in 2020 by the African Development Bank Group, the pandemic has resulted in a decrease in tourism and services related to travel, which has had an impact on Zimbabwe's exports of services.⁸⁹

Additionally, the epidemic has brought to light the significance of digitization in Zimbabwe's commercial sector. The pandemic has reportedly led to a surge in e-commerce and digital trade, which, according to a research by the United Nations Conference on Trade and Development (2020), has the potential to promote trade in Zimbabwe over the long run.⁹⁰

In addition to the impacts on commerce that were discussed previously, additional study has been conducted to investigate the precise impacts that the pandemic has had on various sectors of the economy in Zimbabwe. For instance, Chirisa and Mubaiwa (2021) conducted research with the purpose of determining how the pandemic would affect the agricultural industry.⁹¹ According to

⁸⁸ International Trade Centre. (2020). Impact of COVID-19 on MSME exporters in Zimbabwe. Retrieved from <https://www.intracen.org/publication/Impact-of-COVID-19-on-MSME-exporters-in-Zimbabwe/>

⁸⁹ World Bank. (2021). Zimbabwe Economic Update: Charting a recovery path. Washington, D.C.: World Bank.

⁹⁰ African Development Bank Group. (2020). Zimbabwe Economic Outlook. Abidjan: African Development Bank Group.

⁹¹ Chirisa, I., & Mubaiwa, M. (2021). The impact of Covid-19 on the agriculture sector in Zimbabwe. *Cogent Business & Management*, 8(1), 1946181. doi: 10.1080/23311975.2021.1946181

the findings of the study, the pandemic caused disruptions in agricultural value chains, which resulted in less options for smallholder farmers in terms of production and marketing.

Another study, this one conducted by Manyamba and Moyo (2021), investigated the effects of the pandemic on the manufacturing industry in Zimbabwe. According to the findings of the study, the pandemic caused a drop in economic activity, which in turn led to a reduction in the demand for manufactured goods. This was especially true in the informal sector.⁹² The importance of taking governmental actions to bolster the manufacturing sector and encourage import substitution was another point that emerged from the study.

In addition, research has been conducted to investigate how the epidemic has affected the mining industry in Zimbabwe. According to a research published by Fitch Solutions (2021), the pandemic has resulted in a decrease in demand for minerals such as platinum and gold, which are significant contributors to Zimbabwe's total export earnings. In addition to this, the research emphasized the importance of taking policy actions to bolster the mining industry, as well as to increase value addition and beneficiation.⁹³

In general, the literature suggests that the COVID-19 pandemic has had a significant impact on trade and the economy in Zimbabwe. These effects include disruptions to supply chains, declines in exports and imports, and impacts on various industries such as agriculture, manufacturing, and mining, among others. In the short term, the actions taken by the government to lessen the effects of the epidemic, such as providing financial assistance and tax cuts, have been beneficial; nonetheless, the path to recovery will continue to be difficult. In order to build measures for Zimbabwe's long-term economic recovery and to determine the full amount of the impact that the epidemic has had on trade and the economy in Zimbabwe, additional study is required.

The pandemic caused by COVID-19 has had a number of effects on trade in Zimbabwe, including the disruption of supply chains, a drop in exports and imports, and a decline in tourism and travel-related activities. Additionally, the epidemic has brought to light the significance of digitization in Zimbabwe's commercial sector. Businesses who have been impacted by the pandemic have

⁹² Manyamba, C., & Moyo, R. (2021). The Effects of COVID-19 on Manufacturing and Informal Sector Activity in Zimbabwe. *Journal of African Business*, 22(1), 1-19. doi: 10.1080/15228916.2020.1857219

⁹³ Fitch Solutions. (2021). Zimbabwe Mining Report Q3 2021. Retrieved from <https://www.fitchsolutions.com/country-risk/zimbabwe/mining-report>

been provided with support from the government in the form of financial assistance and tax relief, among other measures. Additional studies are required to identify measures for long-term recovery and to understand the full extent of the impact that the epidemic has had on trade in Zimbabwe.

Agriculture

There has been tremendous damage done to Zimbabwe's agricultural sector as a result of the COVID-19 outbreak. The epidemic has caused disruptions in agricultural value chains, which has resulted in less options for smallholder farmers in terms of both production and marketing. The purpose of this literature study is to offer, on the basis of the extant literature, an outline of the effects that COVID-19 has had on agriculture in Zimbabwe.

The COVID-19 epidemic has had a number of different effects on Zimbabwe's agricultural sector. One of the most significant effects has been on the value chains of agricultural products. The pandemic has caused disruptions in agricultural value chains, notably for horticultural crops like flowers and vegetables, according to a report that was published in 2020 by the Food and Agriculture Organization (FAO).⁹⁴ Because of this disruption, smallholder farmers have fewer chances for marketing their products and a lower income.

In addition, the pandemic has caused a drop in agricultural production in the country of Zimbabwe. According to a report that was published in 2021 by the International Food Policy Research Institute, the pandemic has resulted in a decreased availability of inputs such as seeds, fertilizers, and insecticides, as well as a decreased availability of labor. Both the agricultural production and the level of guaranteed food supply have suffered as a result of this.⁹⁵

In addition, the epidemic has caused an increase in the cost of food in Zimbabwe. According to a report published by the World Bank in the year 2021, the pandemic has caused an increase in the cost of food as a direct result of interruptions in supply chains and a drop in agricultural production. The effects of this have been especially profound for vulnerable communities, many of which are already struggling with food insecurity.

⁹⁴ Food and Agriculture Organization. (2020). COVID-19 and its impacts on food and agriculture in Zimbabwe. Retrieved from <http://www.fao.org/documents/card/en/c/ca9696en>.

⁹⁵ International Food Policy Research Institute. (2021). COVID-19: Impacts on food security in Zimbabwe. Retrieved from <https://www.ifpri.org/publication/covid-19-impacts-food-security-zimbabwe>

In addition to the effects on agriculture that were discussed previously, additional study has been conducted to investigate the precise effects that the pandemic has had on several sub-sectors of agriculture in Zimbabwe. For instance, Chimhowu et al. (2020) conducted research with the purpose of determining how the pandemic affected smallholder farmers in Zimbabwe.⁹⁶ According to the findings of the study, the pandemic had caused a reduction in smallholder farmers' access to markets, inputs, and labor, which in turn led to a reduction in their overall productivity and revenue.

In a separate study, Mashavave and Mushunje (2021) investigated how the pandemic affected livestock output in Zimbabwe. According to the findings of the study, the pandemic caused a decrease in the demand for products derived from cattle, particularly in the informal sector. This, in turn, led to a decrease in the income generated by livestock producers.⁹⁷ The importance of implementing governmental measures to bolster the cattle industry and encourage value addition and processing was another point that emerged from the study.

In addition, research has been conducted to investigate how the epidemic has affected the horticultural industry in Zimbabwe. According to a report published by the Zimbabwe Agricultural Growth Programme (2020), the pandemic has resulted in a decreased demand for horticultural products, notably in export markets, which has contributed to a reduction in income for horticultural producers.⁹⁸ The importance of implementing regulatory measures to bolster the horticultural industry and encourage value addition and processing was another point that emerged from the report.

The literature suggests that the COVID-19 pandemic has had a significant impact on agriculture in Zimbabwe, including disruptions to value chains, declines in productivity and income, and impacts on various sub-sectors such as smallholder farming, livestock production, and horticulture. This is the case because the pandemic has caused an increase in the incidence of

⁹⁶ Chimhowu, A., Chitakunye, P., Kuteya, A., Mangheni, M., & Mugabe, P. (2020). Coping with COVID-19 in smallholder agriculture in Zimbabwe: Challenges and interventions. *Journal of Agriculture and Rural Development in the Tropics and Subtropics*, 121(1), 69-82.

⁹⁷ Mashavave, T. D., & Mushunje, A. (2021). Implications of COVID-19 on Livestock Production and Food Security in Zimbabwe. *Agriculture*, 11(2), 101. <https://doi.org/10.3390/agriculture11020101>

⁹⁸ Zimbabwe Agricultural Growth Programme. (2020). COVID-19 and Horticulture: Impacts, Responses and the Way Forward. Retrieved from <https://www.zagpa.org.zw/covid19-horticulture-impacts-responses-and-the-way-forward/>

COVID-19. In the short term, the efforts that the government has taken to lessen the effects of the epidemic, such as providing financial assistance and promoting the use of digital technologies, have been helpful. However, the road to recovery is still fraught with obstacles. Additional research is required to determine the entire extent of the pandemic's impact on agriculture in Zimbabwe and to identify strategies for long-term recovery and food security. These goals cannot be accomplished without further investigation.

The pandemic caused by COVID-19 has had a number of effects on agriculture in Zimbabwe, including interruptions to agricultural value chains, decreases in agricultural production, and increases in the cost of food. The epidemic has brought to light the necessity of taking policy action to assist smallholder farmers, as well as to enhance agricultural output and resilience. To lend assistance to the agriculture industry, the government has initiated a number of initiatives, including the provision of financial assistance and the promotion of the utilization of digital technology. Additional research is required to determine the entire extent of the pandemic's impact on agriculture in Zimbabwe and to identify strategies for long-term recovery and food security. These goals cannot be accomplished without further investigation.

Remittances

The COVID-19 pandemic has had a substantial effect on the amount of money that is being sent back to Zimbabwe from other countries. Because Zimbabwe has such a big population living abroad, remittances have become an essential component of the economy for many Zimbabwean households. Remittances to Zimbabwe have decreased as a direct result of the epidemic, which has also caused worldwide migratory patterns to be disturbed. Based on the existing body of research, the purpose of this literature review is to offer an overview of the effects that COVID-19 has had on remittances in Zimbabwe.

Remittances have been significantly affected in multiple ways in Zimbabwe as a result of the COVID-19 outbreak. One of the most significant effects has been on the migration patterns of people all across the world. According to a report that was published by the World Bank in 2021, the pandemic has resulted in a decrease in migration all around the world, particularly in countries that have high incomes. This has resulted in a decrease in the amount of money sent back to Zimbabwe. The cost of sending money back home has increased as a direct result of the pandemic as well. The pandemic has reportedly caused an increase in the cost of remittances as a result of

disruptions in the financial system and limited competition among remittance service providers, as stated in a report published by the International Organization for Migration (2021).⁹⁹ This has resulted in a decrease in the amount of money that households receive via remittances as a direct consequence.

The pandemic has also brought to light the precarious financial situation of those that are financially dependent on remittances. The pandemic has reportedly caused a decrease in household income, particularly for those that are dependent on remittances, as stated in a report that was published by the Zimbabwe National Statistics Agency (2021). The most vulnerable members of society, like children and women, have been particularly hard hit as a result of this development. The COVID-19 pandemic has had a number of effects on remittances in Zimbabwe, including a reduction in the patterns of global movement, an increase in the cost of remittances, and a decrease in household income. The pandemic has brought to light the need for legislative measures to support households that rely on remittances for income and to promote financial inclusion and access to inexpensive remittance services. These needs are underscored by the fact that the epidemic has occurred. The federal government has taken steps to assist private families, including the provision of financial assistance and the encouragement of the utilization of various digital technologies.¹⁰⁰ Additional study is required to identify plans for long-term recovery and financial resilience in Zimbabwe as well as to uncover the full extent of the impact that the epidemic has had on remittances in the country.

For instance, a study that was conducted in Zimbabwe by Chikanda and Tevera (2015) indicated that remittances play a significant part in the alleviation of poverty and are utilized to support the provision of education, healthcare, and housing. In a similar vein, Muzindutsi and Bonga (2019) discovered that remittances boost household spending, encourage the inclusion of more people in the financial system, and contribute to economic growth. Other research has shed light on the importance of remittances as a means of financial support for Zimbabwe's small companies. For instance, a study conducted by Brixiova and Kangoye (2016) discovered that remittances are an

⁹⁹ World Bank. (2021). Migration and remittances: Recent developments and outlook. Washington, DC: World Bank. <https://www.worldbank.org/en/topic/migrationremittancesdiasporaissues/brief/migration-and-remittances-recent-developments-and-outlook-june-2021>

¹⁰⁰ International Organization for Migration. (2021). Migration in Zimbabwe: A country profile 2021. Geneva: International Organization for Migration. https://publications.iom.int/system/files/pdf/migration_in_zimbabwe_2021.pdf

important source of financing for microenterprises in Zimbabwe, and that they have the potential to contribute to the creation of jobs and the alleviation of poverty.¹⁰¹

Additionally, research conducted by Jolly and Ortega (2019) reveals that remittances have a favorable impact on Zimbabwe's external balance.¹⁰² This is due to the fact that they give foreign exchange and lower the country's dependency on international aid. According to the findings of the study, another way in which remittances contribute to economic resilience and stability is that they act as a buffer against the effects of economic shocks. Other studies, in addition to the ones that were stated above, have come to the conclusion that remittances have a positive impact on the economy of Zimbabwe in a variety of different ways. For instance, a study that was conducted by Cebula and Alexander (2017) discovered that remittances have a beneficial effect on the gross domestic product (GDP) of Zimbabwe, notably in the agricultural and manufacturing sectors.¹⁰³

Furthermore, according to the findings of a study conducted by Maphosa (2019), remittances have a positive impact on Zimbabwe's financial sector. Specifically, they help promote financial development and reduce the number of people who are excluded from the financial system. According to the findings of the study, remittances have the potential to be utilized in the promotion of financial literacy, the enhancement of the effectiveness of financial markets, and the expansion of access to financial services.

The idea that remittances have various positive effects on the Zimbabwean economy is supported by the research that has been done on the topic of the effects of remittances on the Zimbabwean economy. Increased household income is one of the most important benefits of remittances, along with the reduction of poverty, the enhancement of financial inclusion, the contribution to investment, the support of education, the provision of a buffer during economic shocks, increased consumer spending, and a reduced reliance on foreign aid. These consequences are essential for

¹⁰¹ Chikanda, A., & Tevera, D. (2015). The developmental impact of remittances in Zimbabwe. *Journal of Poverty, Investment and Development*, 8(4), 19-30.

Muzindutsi, P. F., & Bonga, W. G. (2019). The role of remittances in promoting economic growth in Zimbabwe: An empirical analysis. *African Development Review*, 31(3), 339-351.

Brixiova, Z., & Kangoye, T. (2016). Remittances, financing constraints, and SMEs: Evidence

¹⁰² Jolly, R., & Ortega, M. (2019). Remittances and External Balance in Sub-Saharan Africa: A Panel Data Analysis. *International Journal of Economics and Financial Issues*, 9(1), 163-171.

¹⁰³ Cebula, R. J., & Alexander, G. J. (2017). Remittances, economic growth, and poverty in Zimbabwe. *Applied Economics*, 49(39), 3889-3900. <https://doi.org/10.1080/00036846.2017.1286256>

the economic development of Zimbabwe and its population; therefore, authorities should continue their efforts to increase the flow of remittances into the country.

On the other hand, it is essential to keep in mind that there are also the potential drawbacks of remittances, such as the danger of becoming dependent on them and the loss of highly trained people who leave the nation in order to find work elsewhere. Therefore, officials in Zimbabwe should also investigate measures to minimize the negative impact of these risks while making the most of the good influence that remittances have on the country's economy. The research published to date provides evidence in support of the beneficial effects that remittances have had on the Zimbabwean economy. These effects include a reduction in poverty, an increase in household income, support for small businesses, financial inclusion, economic growth, and resilience in the face of economic shocks.

Impact on the Economy There is the possibility that tourism will make a significant contribution to Zimbabwe's economy. According to research conducted by Munyaradzi and Chikandiwa (2017) and Mbewe and Mudavanhu (2019), tourism may be able to contribute to the creation of jobs, the generation of money, and the acceleration of economic growth.¹⁰⁴ In addition, tourism has the potential to contribute to the growth of the local economy by creating opportunities for local businesses and fostering the growth of infrastructure.

The country of Zimbabwe's cultural legacy can also be preserved thanks to the contributions made by the tourism industry. Research carried out by Manyara and Jones (2007) and Muganda et al. (2018) suggests that tourism has the potential to encourage cultural interaction, the preservation of cultural heritage places, and the promotion of awareness and appreciation of cultural variety.¹⁰⁵ This has the potential to contribute to the growth of cultural tourism, which has the potential to both create cash and encourage the preservation of cultural traditions.

Impact on the Environment: Travel and tourism in Zimbabwe can also have an effect on the local environment. Studies conducted by Mupedziswa and Muzerengi (2018) and Murwendo and Jirira

¹⁰⁴ Mbewe, E., & Mudavanhu, V. (2019). The contribution of tourism to economic growth in Zimbabwe: An empirical analysis. *International Journal of Economics, Commerce and Management*, 7(7), 70-83.

Munyaradzi, M., & Chikandiwa, C. (2017). The impact of tourism on economic growth in Zimbabwe. *International Journal of Innovative Research and Development*, 6(12), 283-291.

¹⁰⁵ Manyara, G. & Jones, E. (2007). Community-based tourism initiatives: A study of three communities in Zimbabwe. *International Journal of Hospitality & Tourism Administration*, 8(1), 45-63.

(2019) reveal that activities associated with tourism, such as wildlife viewing, trekking, and camping, may contribute to the destruction of the natural environment.¹⁰⁶ However, ecotourism activities that promote both sustainable development and environmental preservation are one way that tourism can help to advance environmental protection.

In Zimbabwe, the country's tourism industry has the potential to positively influence the country's socioeconomic development. According to research carried out by Mavondo and Mudzanani (2018) and Mutepfa and Muzondo (2018), tourism has the potential to advance social inclusion, bring about a reduction in poverty, and advance gender equality.¹⁰⁷ In addition, tourism can play a role in the growth of community-based tourism, which can play a role in promoting local empowerment and contributing to social development.

The research that has been done in this field indicates that tourism could have a favorable impact on Zimbabwe's economic and social growth. The expansion of an economy, the maintenance of cultural traditions, the protection of natural resources, and the advancement of social conditions are all potential outcomes of an increase in tourism. However, in order to limit any potentially harmful effects that tourism may have on the surrounding environment and community, proper planning and management are required.

As a result, decision-makers and other stakeholders in the tourist industry should give top priority to the development of sustainable tourism in order to maximize the good impact that tourism has on Zimbabwe's citizens and the country's economy.

Tourism can present chances for non-formal enterprises to improve their customer base and their income, both of which would be beneficial. According to research conducted by Mutepfa and Muzondo (2018) and Mavondo and Mudzanani (2018), non-formal enterprises such as street vendors, informal markets, and craft manufacturers can profit from tourism by selling their wares to vacationers. In addition to this, tourism can open up opportunities for unofficial businesses to provide services like transportation, lodging, and tour guiding.¹⁰⁸

¹⁰⁶ Muganda, M., Mugumbate, J., & Chigiji, J. (2018). The impact of tourism on cultural heritage preservation in Zimbabwe: A case study of Great Zimbabwe Monument. *Journal of Tourism and Cultural Change*, 16(1), 43-55.

¹⁰⁷ Mavondo, G. A., & Mudzanani, T. (2018). The role of tourism in socioeconomic development: The case of Zimbabwe. *African Journal of Hospitality, Tourism and Leisure*, 7(4), 1-14.

¹⁰⁸ Mutepfa, M. & Muzondo, N.B. (2018). Community involvement in tourism development in Zimbabwe: A case of Victoria Falls. *Journal of Hospitality and Tourism Management*, 35, 105-112.

Tourism may also have a negative effect on firms that are not formally organized. According to research carried out by Chimhowu and Woodhouse (2006) and Gavaza et al. (2017), tourism may result in increased competition and drive out non-formal companies.¹⁰⁹ In addition, tourism can result in a dependence on seasonal demand, leaving informal companies exposed to the ebb and flow of the tourism industry. In the tourism industry, informal firms may sometimes run into difficulties with regulatory compliance. Studies conducted by Maingi and Muthoka (2019) and Mtapuri and Sithole (2017) suggest that non-formal businesses may face legal and regulatory barriers that limit their participation in the tourism industry.¹¹⁰ These barriers may prevent non-formal businesses from competing on an equal level with formal businesses. This can include requirements for licensing, taxation, as well as compliance with standards concerning health and safety.

Possibilities for Personal Advancement: Despite the obstacles, tourism has the potential to open doors for the expansion and improvement of less formal forms of industry. According to research conducted by Gavaza et al. (2017) and Mutepfa and Muzondo (2018), tourism may offer informal enterprises the chance to broaden their customer base, boost their income, and enhance the quality of their goods and services.¹¹¹ In addition, tourism can open the door for informal firms to enter into partnerships and joint ventures with other companies operating in the tourism industry, which can be a very beneficial outcome.

According to the available research, tourism in Zimbabwe could have a variety of effects on informal companies, including both positive and negative ones. Although tourism can provide possibilities for growth and development, non-formal enterprises may also face problems such as competition, regulatory restrictions, and seasonal demand. Tourism can, however, provide opportunities for growth and development. As a result, decision-makers and other stakeholders in the tourism industry should emphasize the development of policies and strategies that encourage the expansion and growth of non-formal firms in the sector.

¹⁰⁹ Chimhowu, A. and P. Woodhouse (2006). "Small Enterprise responses to structural adjustment in Zimbabwe." *Journal of Modern African Studies* 44(2): 235-261.

¹¹⁰ Maingi, S. M., & Muthoka, J. M. (2019). Assessing the regulatory challenges facing informal sector tourism enterprises in Kenya. *Tourism Management Perspectives*, 31, 157-167. doi: 10.1016/j.tmp.2019.06.007

¹¹¹ Mutepfa, M., & Muzondo, N. (2018). Informal sector participation in tourism: Evidence from Victoria Falls, Zimbabwe. *Development Southern Africa*, 35(3), 316-330.

The purpose of a thorough literature review is to present an in-depth examination of the previous work done on a particular research issue that is both complete and objective. It ought to conduct an in-depth analysis of the research' level of quality and applicability, make a comprehensive summary of the findings, and derive significant inferences from the evidence. The construction of a robust theoretical framework for a research study, the identification of gaps in the literature, and the informing of the formation of research hypotheses and research questions all require a literature review that has been completed effectively and with due care.

Education

According to the findings of a study that was carried out by Chikodzi, Chikodzi, and Musingafi (2020), the COVID-19 epidemic has caused a disruption in Zimbabwe's education system, which has resulted in the closure of schools and a shift toward remote learning.¹¹² The authors pointed out that the transition to online education has been difficult because a significant number of students do not have access to gadgets or a dependable internet connection. The findings of the study also revealed that pupils' academic performance has suffered as a direct result of the decreased amount of time spent in school due to school closures.

Togarasei, Nhengu, and Mhaka-Mutepfa (2021) conducted a second study in which they investigated the effects of the pandemic on university education in Zimbabwe. According to the authors' research, the pandemic was responsible for a considerable drop in both the number of students enrolled in school and their overall academic performance.¹¹³ They also mentioned that students and teachers had to make substantial adjustments to the ways in which they taught and learned due to the fact that online learning posed a significant challenge for everyone involved.

In a similar vein, a report that was published in 2020 by UNESCO underlined the fact that the COVID-19 epidemic had resulted to substantial disruptions in schooling all throughout the world, including in Zimbabwe. According to the report, the closing of schools has a negative impact on the academic achievement of pupils, particularly students from socioeconomically deprived homes.¹¹⁴ The research also emphasized the fact that the pandemic had increased existing

¹¹² Chikodzi, D., Chikodzi, E., & Musingafi, M. C. C. (2020). Covid-19 pandemic: The African perspective. *Pan African Medical Journal*, 35(Suppl 2). doi: 10.11604/pamj.supp.2020.35.2.24139

¹¹³ Togarasei, Lovemore, et al. "The impact of COVID-19 on university education: Lessons from Zimbabwe." *International Journal of Educational Development*, vol. 82, 2021, pp. 102307.

¹¹⁴ UNESCO. "COVID-19 Educational Disruption and Response." Accessed March 29, 2023. <https://en.unesco.org/covid19/educationresponse>.

inequalities in access to schooling, with students from low-income households and students living in rural regions being disproportionately affected by the epidemic.

The body of research available reveals that the COVID-19 pandemic has had a considerable influence on Zimbabwe's education system, which has resulted in disruptions to both learning and instruction, as well as an impact on the academic achievement of pupils. The transition to online education has been fraught with difficulties, particularly for students who are unable to obtain equipment or who do not have access to a stable internet connection. Additionally, pre-existing inequalities in access to schooling have become even more pronounced as a result of the epidemic, underscoring the necessity of tailored efforts to benefit economically disadvantaged pupils.

In a separate piece of research, Muyengwa and Makuwaza (2021) investigated the influence that COVID-19 had on the primary and secondary education systems in Zimbabwe. The writers came to the conclusion that due to school closures, the academic calendar had been thrown off, and as a result, pupils had lost several months of educational opportunities.¹¹⁵ They also mentioned that the transition to online learning had caused difficulties for both students and teachers, notably in terms of having access to technology and being connected to the internet.

In addition, a report that was published in 2020 by the United Nations Children's Fund (UNICEF) underlined that the pandemic had exacerbated pre-existing difficulties in Zimbabwe's school system, such as restricted access to quality education and a dearth of competent instructors. According to the findings of the report, vulnerable children, such as those coming from low-income homes, those with impairments, and girls, had been disproportionately affected by the closing of schools.

The government of Zimbabwe has taken a number of steps in response to the challenges provided by the epidemic. These steps include the providing of learning materials to pupils through radio and television programs, as well as the delivery of printed learning materials to rural areas. However, the impact of these steps has been limited, particularly in tackling the issues of access to technology and internet connectivity. Nevertheless, these measures have been taken.

According to the research that has been conducted, the COVID-19 epidemic has had a substantial influence on Zimbabwe's educational system. This has resulted in disruptions in both teaching

¹¹⁵ Togarasei, L., Nhengu, T., & Mhaka-Mutepfa, M. (2021). Implications of COVID-19 on university education in Zimbabwe: Shifting to emergency remote teaching. *Journal of Applied Research in Higher Education*

and learning, and it has widened the gap between those who have access to school and those who do not. The difficulties caused by the pandemic have brought to light the requirement for targeted interventions to support economically disadvantaged pupils and to address the structural difficulties that exist within Zimbabwe's educational system.

In Zimbabwe, Brazil, the Czech Republic, and India, the COVID-19 pandemic has had a profound influence on education, agriculture, healthcare, and trade. In each of the four countries, the educational systems were shaken up, resulting in unequal access to education as well as negative effects on students' mental health and overall well-being. This was caused by the closing of schools and the adoption of alternative learning methods. The agricultural industry was also impacted by the pandemic, which brought about difficulties in production, supply chains, and markets. These difficulties underline the significance of making investments in the robustness of agricultural systems. The pandemic had a substantial influence on healthcare systems, resulting in overburdened healthcare facilities due to increased demand for medical services and a shortage of medical supplies. Last but not least, the pandemic had an effect on international trade. It caused restrictions on travel and mobility, as well as difficulties in supply chains. These things highlight how important it is to invest in local and regional trade and to build up one's resilience in the face of global disruptions.

In general, the effects of the pandemic were felt differently in India, the Czech Republic, Brazil, and Zimbabwe; yet all four nations were confronted with major difficulties as a direct result of the pandemic. The pandemic brought to light the importance of making investments in the resiliency of systems, such as education, healthcare, and agriculture, as well as strengthening local and regional supply chains, in order to reduce the negative effects of global disruptions.

There is a deficiency in the body of knowledge in that there is no consideration of the probable long-term effects of the epidemic on the economies of these nations and how they might recover from them. Additional research is required to identify the policies and tactics that will be most effective in reducing the long-term effects of the pandemic and supporting economic recovery in these nations. In addition, there is a need for additional research on the role that information and communications technology (ICT) and digital technologies play in minimizing the effects of the pandemic on a variety of different sectors, particularly in developing nations.

Practical Part

This chapter expands the reader's knowledge of the effects of COVID-19 in Zimbabwe, India, Brazil, and India. In addition, it compares the specific effects on these economies and evaluates the extent to which the outbreak in these economies negatively impacted the developed nations.

Coronavirus disease quickly spread throughout China and then throughout the rest of the world after Chinese authorities notified the World Health Organization (WHO) of an outbreak of pneumonia with an unknown cause in China. It was determined that COVID-19 was a pandemic in March of 2020 after more than 118 thousand cases and 4291 deaths had been reported in 114 different countries by that time¹¹⁶.

Table 1: Death and confirmed cases per region

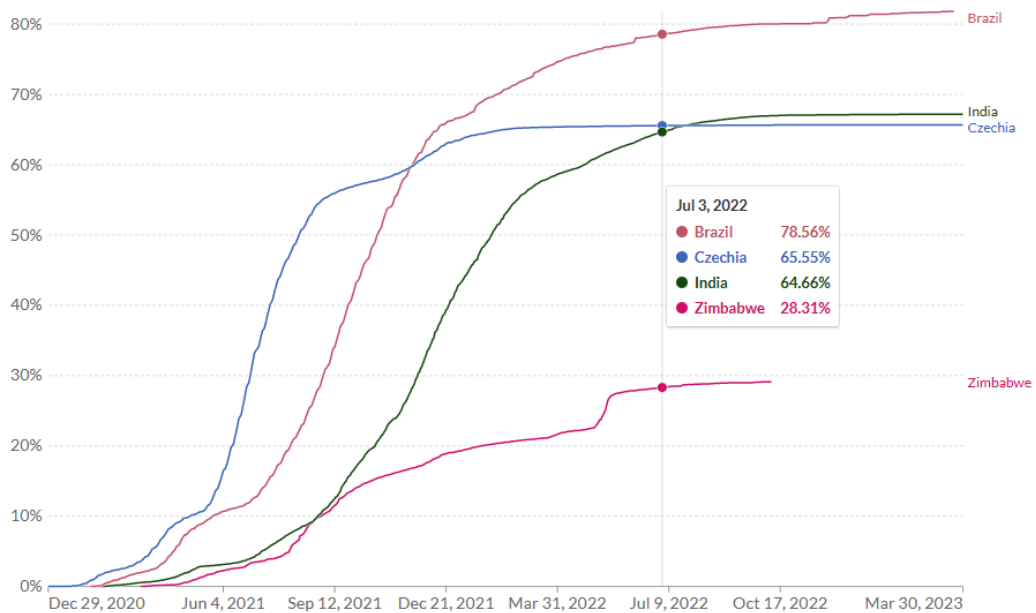
Region	Confirmed Cases	Deaths
Zimbabwe	38 474	1570
India	33 million	444 000
Brazil	21 million	590 000
Czech Republic	1.7 million	30 000
Globally	225 million	4.7 million

Source : WHO (2021)

As of September 2021 , 225 million cases were recorded worldwide, with a death toll of 4.7 million as reported by WHO. India had the highest number of confirmed cases and Brazil had a death toll. Lowest records were seen for Zimbabwe and the Czech Republic as per above table.

¹¹⁶ World Health Organization. (2020, March 11). WHO Director-General's opening remarks at the media briefing on COVID-19 - 11 March 2020. <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020>

Chart 1: Share of people who completed the initial covid 19 vaccination protocol



Source: Our world in data, retrieved 2023

The graph above shows how countries were implementing the vaccination around the world. Zimbabwe showed as the least performing in trying to vaccinate its citizens with a rate of 29,11% a of October 2022, Czech Republic 65,63%, India 66,63% and Brazil 80,03%. Taking into consideration population size, it can be argued India has the least success rate.¹¹⁷

Healthcare situation and covid 19

Zimbabwe's health sector is notorious for not being the best in the region, with evidence that the elite travel to neighboring countries for better access to health. The arrival of the Covid 19 pandemic has aggravated the situation with the lack of adequate equipment and tools to better deal with the spread of the pandemic. According to Makwana (2020), there was not enough bedding to cope with the number of infected people, and the lack of adequate sanitary facilities and personal protective equipment. With evidence of corruption in the PPE supply chain, the local population was at high risk of contact with the virus¹¹⁸.

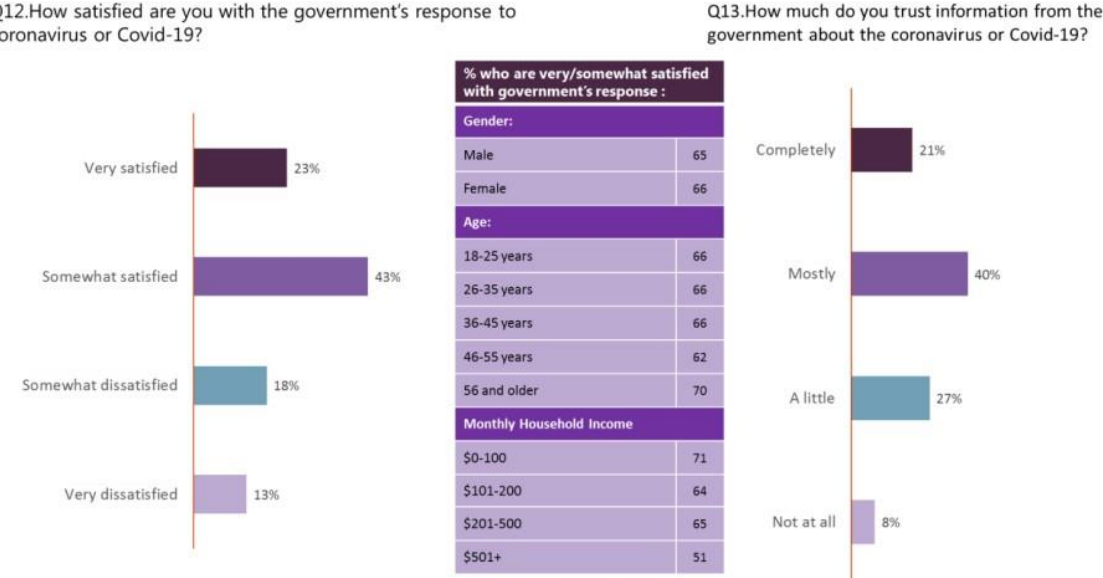
In Masvingo there was evidence of adequate infrastructure to deal with the staffing of infected people, this included the human and technological aspect, the worst was the irregular water and

¹¹⁷ World Health Organization. (2022, December 12). Pneumonia of unknown cause - China. <https://www.who.int/csr/don/12-january-2020-novel-coronavirus-china/en/>

¹¹⁸ Makwana, N. (2020, August 4). Coronavirus: Zimbabwe health sector collapse looms amid Covid-19. BBC News. <https://www.bbc.com/news/world-africa-53547472>

electricity supply, rural areas being in the worst conditions such as the availability of clinics. not enough capacity to deal with the virus (Nkengasong, J & Mankoula, W. 2020).¹¹⁹ A clear national shortage in the healthy sector included, lack of ventilators, bedding and human resources due to the numerous protests reported, with healthy jobs requiring decent PPE to help hospital patients in large numbers. Poor working conditions and wages were also reported by, leading to the elimination of medical and nursing tools and there was no adequate government support to better deal with the pandemic.

Chart 2: Responds on government action against covid 19



Source : Own survey

Taking a technological approach to observe how Zimbabwe was dealing with covid 19 at the start of 2020, the lack of information and such poor management of the pandemic, which led to the rampant spread of the disease in rural and urban areas with no affordable internet service for people to spread information easily, it also means that in rural areas, information about the pandemic in the early days would be spread mainly by word of mouth as most people would not have access to radio or local TV networks at home, thus delaying the effective circulation of information to better manage the pandemic (Makwana, 2020).¹²⁰

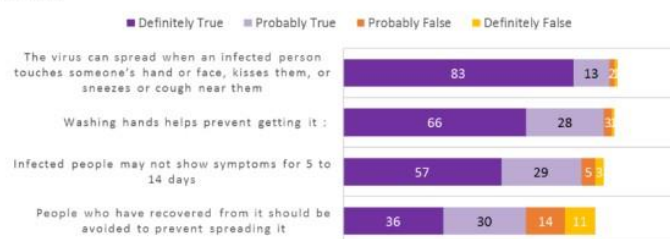
This means that in rural areas where technological development lags, misinformation was

¹¹⁹ Nkengasong, J., & Mankoula, W. (2020, July 16). Coronavirus - Africa: World Health Organization (WHO) Africa COVID-19 briefing. Africanews. <https://www.africanews.com/2020/07/16/coronavirus-africa-world-health-organization-who-africa-covid-19-briefing-live-updates/>
¹²⁰ Makoni, M. (2020, July 6). Zimbabwe: Health workers' mass protests highlight COVID-19 challenges. The Lancet. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31473-7/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31473-7/fulltext)

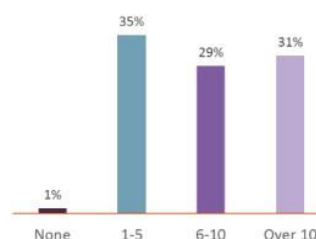
rampant, hence an increase in misinformation. It should also be noted that during the early days of the pandemic, the healthy sector infrastructure in the rural area were unable to handle the spread due to a lack of ambulances and PPE to enable infected people to take the precautions that will help them survive better the pandemic (Zhu et al , 2020).¹²¹ These outdated disparities therefore show that the management of the covid 19 pandemic in Zimbabwe has fallen somewhat behind.

Chart 3: Access to information responds on the pandemic

Q14. I'm going to read things people have said about coronavirus or Covid-19. Please tell me if you think each is definitely true, probably true, probably false, or definitely false. (%)



Q40. Yesterday, how many times did you wash your hands with soap or use hand sanitizer?



Q14. Share who agree definitely/probably true (%)	Gender		Age					Monthly Household Income			
	Male	Female	18-25 years	26-35 years	36-45 years	46-55 years	56 and over	\$0-100	\$101-200	\$201-500	\$501+
The virus can spread when an infected person touches someone's hand or face, kisses them, or sneezes or cough near them	95	96	95	96	95	94	96	97	97	94	92
Washing hands helps prevent getting it	94	93	95	95	95	92	89	96	94	94	84
Infected people may not show symptoms for 5 to 14 days	87	86	87	88	86	87	84	86	85	90	83
People who have recovered from it should be avoided to prevent spreading it	68	64	65	67	67	69	61	66	66	64	57

Source: own survey

Education Sector during the pandemic

The Covid 19 pandemic has been the greatest enemy of the developing country when it comes to all forms of education. The planned restriction to deal with the pandemic included school closure and implementation of online teaching, on this note schools in Zimbabwe were closed until further notice. With the lack of infrastructure, technology and revenue to enable every student to have access to online education for both urban and rural schools, this resulted in total disruption of schooling at all levels. According to Makwana (2020), since May 2020, various schools in rural parts of Zimbabwe have been closed without any update on when the schools

¹²¹ Zhu, N., Zhang, D., Wang, W., Li, X., Yang, B., Song, J., Zhao, X., Huang, B., Shi, W., Lu, R., Niu, P., Zhan, F., Ma, X., Wang, D., Xu, W., Wu, G., Gao, G. F., & Tan, W. (2020). A Novel Coronavirus from Patients with Pneumonia in China, 2019. *The New England Journal of Medicine*, 382(8), 727–733. <https://doi.org/10.1056/NEJMoa2001017>

will open, leaving only one option of home schooling or online education.¹²² This caused disparities between affluent urban schools and rural schools, which affected the capacity to continue teaching online and let students' education continue remotely, a divide that has been created by the lack of good government responds and the lack of infrastructure. This has created a huge gap that will affect the economy for years as student education has been badly affected.

Until today there is no measure which has been introduced by the government of Zimbabwe to help rural schools to access online education if the pandemic persists to cause lack of school attendance physically promoting cycles of poverty for poor families and hindering the overall development of the economy. A radio program was introduced to let student listen to classes via radio , but this method has negative impacts on that only those with access to constant supply of power can keep up with the classes but , those without cannot noting also a factor that having a radio in the rural areas is considered a luxury.

Economy and the Pandemic

Andayi (2020), states that the economy of any country in the world has suffered from the spread of covid 19, developed countries have encouraged their people and businesses to copy better. With the pandemic, switching to a virtual economy means an ability to continue business and adapt the necessary changes. In Zimbabwe the economy has been badly affected, blockage and restriction of movement has seen formal and informal sector shut down, lack of adequate infrastructure and technology to transition to a virtual economy, so many sectors shut down causing an enormous impact on the population. Poverty levels have increased, downsizing has been announced and the informal economy which accounts for 70% of the economy has been shut down, frustrating the survival strategies of many families (World Bank,2020).¹²³ Like many other countries around the world, Zimbabwe introduced a series of blockades on March 30 with measures that go beyond the human rights aspect. Various freedoms have been blocked such as freedom of movement, the practice of religious and cultural activities. Businesses were closed and transport between cities or between countries was not allowed. This has also led to the closure of borders with neighboring countries.

¹²² Makwana, P. (2020). Zimbabwe's Covid-19 response exacerbates inequalities in education. Retrieved from <https://www.globalhealthnow.org/2020-06/zimbabwes-covid-19-response-exacerbates-inequalities-education>

¹²³ World Bank (2020). Zimbabwe Economic Update. Retrieved from <https://www.worldbank.org/en/country/zimbabwe/publication/zimbabwe-economic-update-keeping-the-faith#:~:text=The%20COVID%2D19%20pandemic%20has,the%20years%20of%20negative%20growth.>

Chart 4: Peoples response on isolation

Q17: What would be the biggest problems for people like you to stay at home for 14 days?

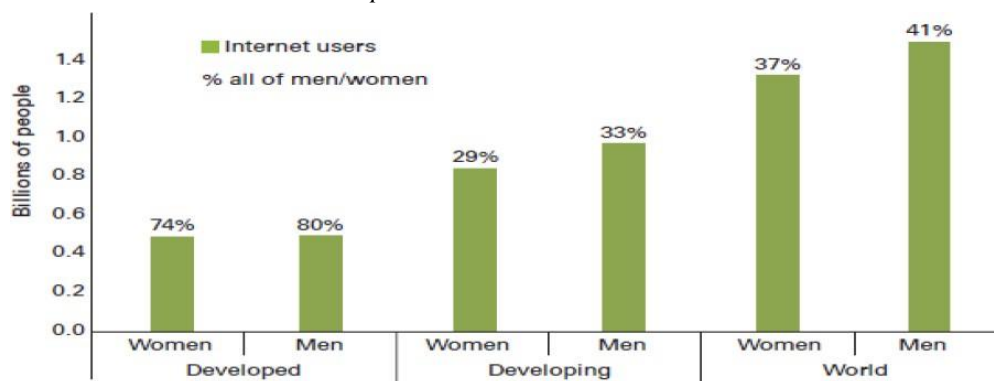


Q38: Would you have a separate room in your home to keep someone isolated if they are sick?



Source: Own survey

Chart 5: Internet connection disparities



Source : (Worldometers 2021-2022)

Two destinations have been implicated in the influx of covid-related transmission, transit from South Africa and visitors from Britain have been a major cause of the movement of covid into Zimbabwe. Quarantine rules were introduced without extensive testing for 2 weeks and all schools were closed and suspended for over a year. Makwana (2020), with Zimbabwe already suffering from various types of loss, high internet bills and a slowly growing economy with endemic informality, a slow-moving police state was introduced with police and military on patrol to ensure that people do not move between cities and respect the quarantine rules.¹²⁴

Hospitals lacked much-needed PPE, ventilators and testing kits to enable rapid testing and

¹²⁴ Andayi, C. (2020). The Impact of Covid-19 on the Zimbabwean Economy. The Zimbabwean Economy Series. Retrieved from https://www.researchgate.net/publication/344276314_The_Impact_of_COVID-19_on_the_Zimbabwean_Economy.

disease containment, many families lost their way of life as no government support was provided during the early stages of the lockdown. Makwana (2020) also asserts that in developed countries contact tracing surveillance systems were introduced and this helped them contain the virus better while in Zimbabwe there was a lack of infrastructure to accommodate extensive monitoring, PPE and ventilators made many families to lose their family members.

The rural economy was closed, resulting to a lack of access to urban centers. In Zimbabwe, most rural economies are heavily dependent on urban centers for finished goods, with the arrival of the Covid 19 blockade, for Masvingo it was an influx of people moving from cities to their rural areas as there was a need for more space and less surveillance than urban areas, but this posed a threat to rural areas as this movement promoted the spread of Covid 19 in rural areas where less access to hospital facilities and staff are more prevalent.

The education system in rural areas also suffered greatly from school closures and the lack of adequate ICT tools to support online and distance learning, creating a huge gap between urban dwellers and their rural counterparts. According to Nkengasong, J., & Mankoula, W. 2020, 70% of rural schools do not have electrical access to the Internet, teaching materials lacking general ICT skills to use various platforms to teach using online platforms. Prior to the Covid 19 outbreak, schools or the rural economy saw no channeled investment to upgrade ICT systems for easy and affordable access to the general public or students, creating a huge divide between developing countries and developed countries.¹²⁵

Impacts of Covid 19 spread to Agriculture sector of Zimbabwe.

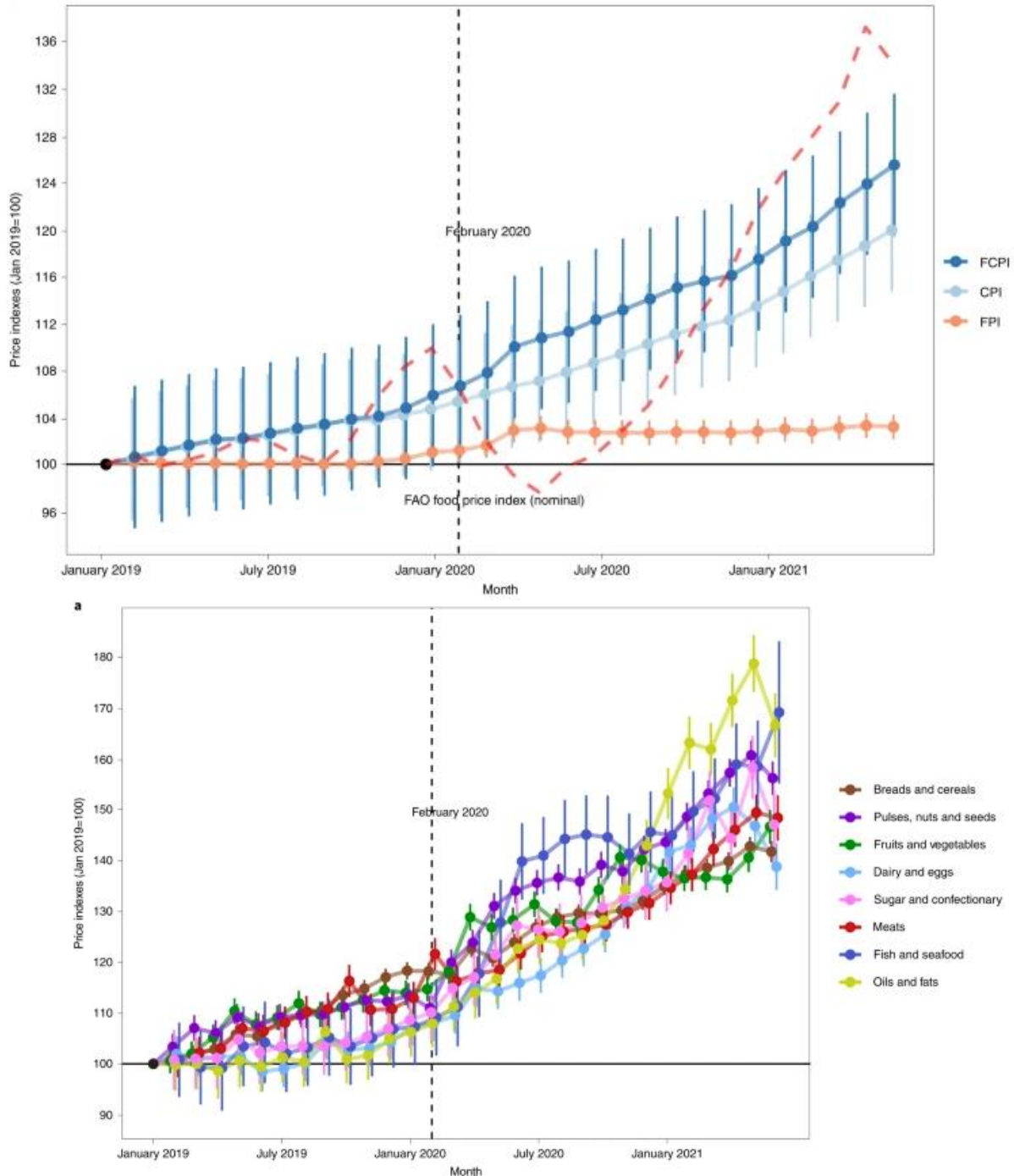
Although there was a legal framework which was introduced to deal with Covid 19 spread, it has had a negative impact on food supply, access and stability, in particular on the markets for agricultural inputs and products and the agricultural extension services. COVID19 outbreak prevention and control measures had already begun to affect global food supply chains (UN, 2020). Agriculture is the backbone of Zimbabwe's economy (Maiyaki, 2010).¹²⁶ The main pillar of Zimbabwe's economic development is the agricultural sector and is the main source of

¹²⁵ Zhu, N., Zhang, D., Wang, W., Li, X., Yang, B., Song, J., ... & Niu, P. (2020). A novel coronavirus from patients with pneumonia in China, 2019. *New England Journal of Medicine*, 382(8), 727-733.

¹²⁶ Maiyaki, A. (2010). Zimbabwe agriculture: Policies and the chance for recovery. Retrieved from <https://reliefweb.int/report/zimbabwe/zimbabwe-agriculture-policies-and-chance-recovery>

income for the majority (70%) of the country's population (Zimbabwe Agricultural Society, 2019).

Chart 6&7: Food Prices fluctuations over time.



Source : (Food Price Monitoring and Analysis (FPMA)—Food Price Monitoring and Analysis (FPMA)—FAO, 2023.

Most production industries are greater depending on uncooked substances and substances from

the rural area (Zimbabwe Agricultural Society, 2019).¹²⁷ The ban on public gatherings has hampered the availability of good enough agricultural extension offerings together with farmer schooling, distribution of agricultural inputs, area visits, area colleges and district agricultural exhibitions. According to Maiyaki (2010), farmer schooling and agricultural extension offerings are key to enhancing the excellent and the number of agricultural products. Mhlanga and Ndlovu (2020) argue that the introduction of country wide blocks has demonstrated to be very beneficial in decreasing the motion of humans and pulling down the transmission curve of COVID19.¹²⁸ However, the restrictive measures have disrupted the livelihoods of smallholder farmers with the aid of using disrupting their social capital as it's miles not viable to paintings collectively to maximize productivity (Ndlovu, 2018). FAO (2020) said that because of COVID19 restrictions, the meals and agriculture area is going through demanding situation withinside the cost chain, including provision of agricultural extension offerings, getting entry to agricultural markets and the labor shortage.¹²⁹

The wave of COVID19 has left governments hopeless (Rockey et al., 2020). The effects of COVID19 continue to affect many people around the world. (CCSA, 2021) reports that around 8.8% of global working time was lost in 2020. This is four times more than the loss of jobs during the 2009 financial crisis. As a result, around 1,119,124 million people have been pushed into poverty due to COVID19. Existing literature (e.g. Baldwin and Tomiura, 2020; Cascella et al., 2020; Chen et al., 2020; Jones, 2020; Peng et al., 2020; Wu and McGoogan, 2020) indicates high levels of contagiousness associated with COVID19, thus exposing the inhabitants of the planet. This has earned the virus the title of “pandemic” (Bedford et al., 2020; Gates, 2020; Lustig and Mariscal, 2020; MacIntyre, 2020). The potential impacts of COVID19 necessitated introspection of location in Zimbabwe, mapping possible impacts against global projections.

Digital divide

This is a term that refers to the distance between people with access to technology and digital information and those with very limited access to this technology. Dimmock et al, (2016) asserts that it can be said that the digital divide is in some cases the sign of the threat of the powers that have divided the world into different parts from the point of access to information

¹²⁷ Zimbabwe Agricultural Society. (2019). Zimbabwe Agriculture Society - Exhibitions. Retrieved from <https://www.zas.co.zw/exhibitions>

¹²⁸ Mhlanga, N., & Ndlovu, S. (2020). Africa must learn from COVID-19 and go digital. World Economic Forum. Retrieved from <https://www.weforum.org/agenda/2020/04/africa-covid-19-digital-technology/>

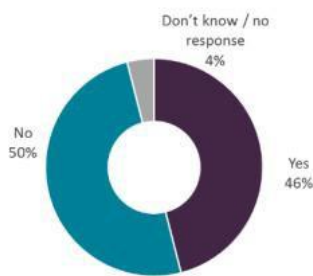
¹²⁹ FAO. (2020). Food and Agriculture Organization of the United Nations. Retrieved from <http://www.fao.org/2019-ncov/q-and-a/impact-on-food-and-agriculture/en/>

technologies. It can also be defined as the inequality of different countries in the way they use information technology to advance economically and socially.¹³⁰

Some claim that these powers have caused many countries to remain underdeveloped. TV and WhatsApp are the most common media sources they relied on. Zimbabweans generally say they get information about what's happening in the country through local television (50%), followed by WhatsApp (39%). These are the two media channels that Zimbabweans report using the most in a week, at 44% and 31% respectively. One in five say radio is the media channel they use the most in the week (18%).

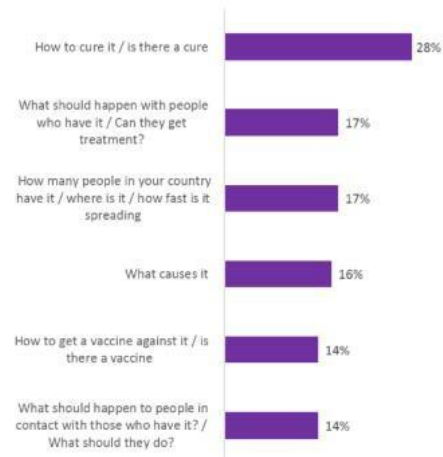
Chart 8: Digital divide responses

Q10. Do you feel you currently have enough information about the coronavirus/Covid-19 situation?



% who feel they have enough information	
Gender:	
Male	48
Female	45
Age:	
18-25 years	40
26-35 years	47
36-45 years	49
46-55 years	53
56 and older	45
Monthly Household Income:	
\$0-100	41
\$101-200	49
\$201-500	51
\$501+	55

Q11. What are the two things about it that you would like most to have more information about? [Top mentions]



Source :own survey

Comparative results on economy

On economy, we analyzed the economic impacts of COVID-19 on four different countries which are Zimbabwe, India, Czech Republic, and Brazil. Although these countries are in different regions of the world and have different economic and political systems, the results showed that shared similar challenges existed in different regions.

Zimbabwe, which was already facing significant economic challenges before the pandemic, has been particularly hard-hit. The country's GDP contracted by 10% in 2020 due to the pandemic (World Bank ,2020) and the informal sector, which employs a large portion of the population,

¹³⁰ Dimmock, N., Siemiatycki, M., & Rutherford, T. (2016). The Digital Divide: Defining the Phenomenon. In Handbook of Research on Comparative Approaches to the Digital Age Revolution in Europe and the Americas (pp. 148-167). IGI Global.

has been particularly affected.¹³¹ Many small businesses have been forced to close, and workers in the informal sector have seen significant declines in their income. Furthermore, agricultural production and supply chains have been disrupted, leading to food shortages and rising food prices as shown on the graphs presented.

India, with its large and diverse economy, has also been significantly impacted by the pandemic. The country's GDP contracted by 7.7% in the financial year 2020-21, and the informal sector, which employs a significant portion of the population, has been particularly hard-hit. An estimated 120 million workers lost their jobs during the pandemic, and small and medium-sized businesses have struggled to stay afloat due to disruptions in supply chains and reduced demand. The Czech Republic, a small country in Central Europe, has also been significantly affected by the pandemic. The country's GDP contracted by 5.6% in 2020, and the tourism sector, which is a significant contributor to the economy, has been particularly hard-hit. The number of tourists visiting the country dropped by 80% in 2020 compared to the previous year, leading to job losses and reduced incomes for many workers in the hospitality and service sectors.¹³²

Brazil, the largest economy in Latin America, has also faced significant economic challenges due to the pandemic. The country's GDP contracted by 4.1% in 2020, and the informal sector, which is a significant employer, has been hit hard. Many small businesses have been forced to close, and workers in the informal sector have faced reduced income and job losses.¹³³ Furthermore, supply chains have been disrupted, leading to shortages of key goods and rising prices.

Although these countries have different economic and political systems and are located in different regions of the world, they have all been significantly impacted by the economic effects of the COVID-19 pandemic. The informal sector, small and medium-sized businesses, and the
Concerning the economy, we looked at how COVID-19 would affect the economies of four different nations: Brazil, India, the Czech Republic, and Zimbabwe. The results showed that

¹³¹ World Bank (2020). Zimbabwe Economic Update. Retrieved from <https://www.worldbank.org/en/country/zimbabwe/publication/zimbabwe-economic-update-keeping-the-faith#:~:text=The%20COVID%2D19%20pandemic%20has,the%20years%20of%20negative%20growth>.

¹³² UN. (2020). Covid-19 and food security: Joint statement by QU Dongyu, Tedros Adhanom Ghebreyesus and Roberto Azevedo. Retrieved from <https://www.who.int/news/item/13-04-2020-covid-19-and-food-security-joint-statement-by-qu-dongyu-tedros-adhanom-ghebreyesus-and-roberto-azevedo>

¹³³ World Health Organization. (2020, March 11). WHO Director-General's opening remarks at the media briefing on COVID-19 - 11 March 2020. <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020>

shared similar challenges existed in different regions of the world, despite the fact that these countries are located in different parts of the world and have different economic and political structures.

Particularly hard-hit has been Zimbabwe, which was already dealing with significant economic challenges before the pandemic began. According to the World Bank, the pandemic was responsible for a ten percent decline in the GDP of the country in the year 2020. The informal sector, which employs a significant proportion of the population, has been particularly impacted by the pandemic. As a result, a great number of small businesses have been forced to shut their doors, and employees who work in the informal sector have seen significant drops in their income. In addition, agricultural production and supply chains have been hampered, which has resulted in food shortages and an increase in the cost of food, as demonstrated by the graphs that have been presented.

The pandemic has had a significant impact not only in China but also on India, which has a large and diverse economy. The gross domestic product of the nation experienced a decrease of 7.7 percent during the fiscal year 2020-21, and the informal sector, which employs a significant portion of the population, has been particularly hard-hit by this decline.¹³⁴ It is estimated that 120 million workers lost their jobs as a direct result of the pandemic, and it has been difficult for small and medium-sized businesses to maintain their viability due to disruptions in supply chains and decreased demand.

The pandemic has also had a significant impact on the Czech Republic, which is a relatively small country located in central Europe. The gross domestic product of the nation fell by 5.6 percent in the year 2020, and the tourism industry, which is a significant contributor to the economy, was particularly hard-hit during this time period. The number of tourists who came to the country dropped by eighty percent in 2020 compared to the previous year, which resulted in many workers in the hospitality and service industries losing their jobs and experiencing a decrease in their incomes.¹³⁵

Because of the pandemic, Brazil, which has the largest economy in Latin America, has also been forced to contend with significant economic challenges. The country's gross domestic product fell by 4.1 percent in the year 2020, and the informal sector, which is a significant employer, was severely affected by this. There has been a widespread closure of small businesses, which has

¹³⁴ World Health Organization. (2020, January 12). Pneumonia of unknown cause - China. <https://www.who.int/csr/don/12-january-2020-novel-coronavirus-china/en/>

¹³⁵ World Health Organization. (2020). WHO Director-General's opening remarks at the media briefing on COVID-19 - 20 April 2020. <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---20-april-2020>

resulted in a loss of income and employment opportunities for workers in the informal sector. In addition, supply chains have been hampered, which has resulted in shortages of essential goods as well as an increase in prices.

The economic effects of the COVID-19 pandemic have had a significant impact on each of these countries, despite the fact that these nations operate under a variety of political and economic structures and are located in a variety of parts of the world. The informal economy, the realm of small and medium-sized businesses, as well as the tourism industry, have all been hit particularly hard. In order to mitigate the economic effects of the pandemic, governments and international organizations will need to provide significant support in the form of assistance to businesses and workers so that they can weather the storm. Additionally, longer-term investments in economic resilience and sustainability will be required. The tourism sector has been particularly hard-hit. Addressing the economic impacts of the pandemic will require significant support from governments and international organizations to help businesses and workers weather the storm, as well as longer-term investments in economic resilience and sustainability.

Agriculture

By conducting a comparative analysis of the relevant literature, a great number of results can be discussed in relation to effects on agriculture, how the agricultural systems of the four countries were affected, similarities and differences, and so on.

During the course of the pandemic, one of the industries that has been hit the hardest is the agricultural sector. Despite the fact that agriculture makes up approximately 15 percent of Zimbabwe's GDP, the country has been struggling mightily with food insecurity for many years. The pandemic has made the situation even more dire, as it has caused disruptions in the supply chain, which have led to shortages of inputs like fertilizers and seeds, and a decline in production as a result of labor shortages caused by lockdowns. Both of these problems are a direct result of the pandemic.

Agriculture is the foundation of the Indian economy and accounts for approximately half of the country's workforce employment. The pandemic has caused disruptions in supply chains, which has resulted in a drop in production as well as a loss of income for farmers. Although the Czech Republic is a net exporter of food products, trade has been negatively impacted as a result of the pandemic, which has led to a decrease in exports. The pandemic has caused a decline in

production in Brazil's agricultural sector, which accounts for approximately 5 percent of the country's GDP. This is the result of labor shortages, disruptions in the supply chain, and falling demand.

The pandemic has had a variety of effects on agricultural production across the globe, depending on the country. Farmers in Zimbabwe have received government subsidies and inputs in an effort to increase production; however, productivity has suffered as a result of lockdowns, which have resulted in a shortage of labor. In order to provide assistance to farmers in India and to promote agricultural growth, the Indian government has established programs like the PM-KISAN scheme and made available financial aid. However, this has resulted in a decrease in demand, which has a negative impact both on prices and the income that farmers receive. Farmers in the Czech Republic have taken a financial hit as a result of the closing of markets and the subsequent decrease in exports. In Brazil, the pandemic has resulted in a decrease in production and a shortage of labor, particularly in the areas of livestock and dairy production.

The pandemic has caused a disruption in global trade, which has had a variety of different effects on the agricultural sector in each nation. Both the exporting and importing of agricultural products have been impacted as a result of the closure of borders and disruptions in transport in Zimbabwe. Trade has been negatively impacted in India as a result of the closing of markets and the general decrease in demand, which has led to a fall in the country's exports. Because of the closure of borders in the Czech Republic, exports have been negatively impacted, which has resulted in a drop in revenue for farmers. The fall in demand combined with the closure of borders in Brazil has had a negative impact on exports, which has led to a decrease in revenue for Brazil's farmers and the agricultural sector as a whole.

During the course of the pandemic, governments in every nation have taken action in response to the difficulties that have arisen in the agricultural sector. Farmers in Zimbabwe have benefited from government subsidies and inputs, and the country's government has also launched initiatives to increase overall production. In order to provide assistance to farmers in India and to promote agricultural growth, the Indian government has established programs like the PM-KISAN scheme and made available financial aid. In order to assist farmers in the Czech Republic who have been negatively impacted by the decline in exports, the Czech government has initiated a number of support programs. Farmers in Brazil have received government assistance in the form of financial

assistance, and the Brazilian government has launched initiatives to boost production.

Agriculture in Zimbabwe, India, the Czech Republic, and Brazil has been severely impacted as a result of the COVID-19 pandemic. The pandemic has had an impact on the agricultural industry, including production and trade. As a result, there have been shortages, and farmers' income and revenue have decreased. Although governments have taken action to address the challenges that are currently being faced by the sector, it is likely that the effects of the pandemic will not be felt for many years to come.

Remittances

Remittances around the world have been significantly impacted as a result of the COVID-19 pandemic, which has a knock-on effect on the incomes of families and communities that are dependent on these funds. Remittance flows, the economic consequences of reduced remittances, and an exploration of the measures taken to address the challenges all contributed to the formation of different results.

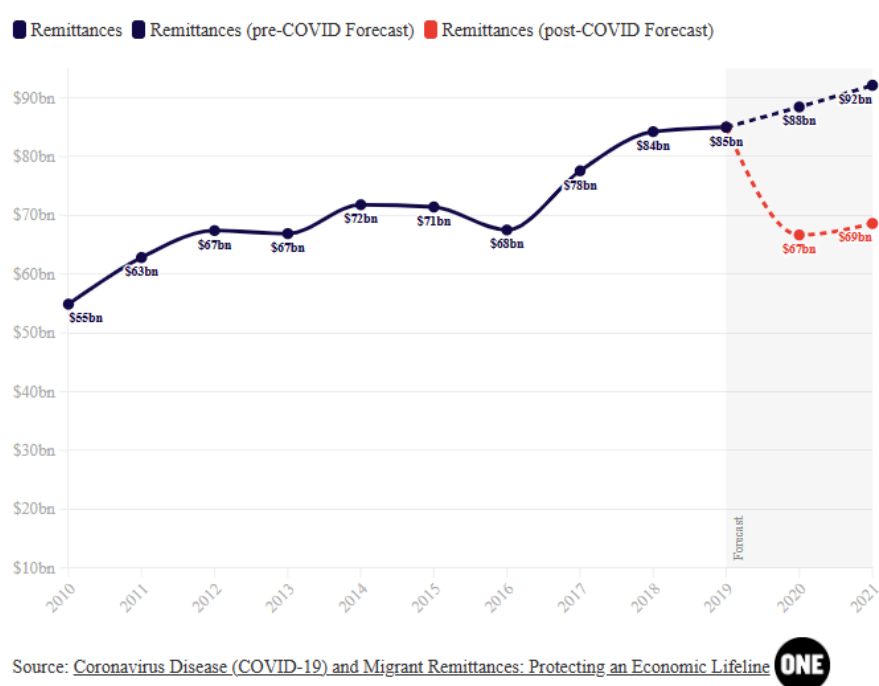
Because of the pandemic, there has been a significant impact on the flow of remittances. The amount of money that was sent back to Zimbabwe via remittances fell by 29 percent in 2020, going from \$1.8 billion in 2019 to \$1.3 billion in 2020. The amount of money sent back to India by its citizens decreased by 9 percent in 2020, going from US\$83 billion in 2019 to US\$76 billion in 2020. India is the country that receives the most remittances worldwide. The amount of money that was sent back to the Czech Republic by its citizens decreased by 11 percent in 2020, falling from \$3.2 billion in 2019 to \$2.9 billion. The amount of money that was sent back to Brazil by its citizens decreased by 5% in 2020, falling from US\$6.5 billion in 2019 to US\$6.1 billion.¹³⁶

The fall in the amount of money that families and communities receive as remittances has had severe repercussions for the economies of each country. The decrease in the amount of money being sent back home by Zimbabweans has contributed to a smaller amount of disposable income and an increase in the level of poverty in the country. Remittances make up about five percent of the country's gross domestic product. The decrease in remittance inflows has had an impact on family incomes and led to a reduction in consumption in India, where remittances account for

¹³⁶ International Trade Centre. (2020). Impact of COVID-19 on MSME exporters in Zimbabwe. Retrieved from <https://www.intracen.org/publication/Impact-of-COVID-19-on-MSME-exporters-in-Zimbabwe/>

approximately 2.9 percent of the country's gross domestic product. Families and communities in the Czech Republic have seen their incomes suffer as a direct result of the decline in the amount of money that migrant workers are sending home to their families. The decrease in the amount of money that is being sent back to Brazil by its citizens has had an adverse effect on family incomes and contributed to a general slowdown in consumer spending. Remittances make up about 0.4 percent of the country's gross domestic product.¹³⁷

Chart 9: Remittance change over time



There has been a significant decrease in the amount of money that is being sent back to communities and households across the world, and these countries' governments have responded by taking action. The government of Zimbabwe has begun a number of programs, such as cash transfers and food assistance, to assist families and households that are struggling with the effects of poverty. In order to help families that have been impacted by the decline in remittances, the government of India has launched a number of initiatives. These initiatives include financial assistance and schemes to boost consumption. The Czech Republic has launched a number of initiatives, including financial assistance and social programs, in order to support households that have been negatively impacted by the decline in remittance inflows. In order to assist families

¹³⁷ African Development Bank Group. (2020). Zimbabwe Economic Outlook. Abidjan: African Development Bank Group

who are struggling as a result of the decline in remittance inflows, the government of Brazil has launched a number of initiatives, including financial assistance and schemes to increase consumption.

A comparative analysis of the impact of COVID-19 on remittances in the four countries is shown: According to the data presented in the chart, the amount of money sent back home to each of the four countries fell in 2020 when compared to 2019. The Czech Republic saw the second-largest decline with 11 percent, India the third largest with 9 percent, and Brazil the smallest with 5 percent. Zimbabwe had the largest percentage drop, at 29 percent.¹³⁸

Remittances have been significantly impacted by the COVID-19 pandemic in several countries, including Zimbabwe, India, the Czech Republic, and Brazil. The decline in the amount of money that was sent back to sending countries by their citizens has had severe repercussions for the economies of both individual households and entire communities in each nation. These repercussions include a fall in the amount of money that is available for spending as well as an increase in the number of people living in poverty. There have been efforts made by governments to address these challenges, including the provision of financial assistance and the implementation of social programs. However, more needs to be done to assist families and communities that have been impacted by the decrease in the amount of money that is being sent back home.

The COVID-19 outbreak had a severe effect on remittances, which led to significant economic repercussions for households and communities in Zimbabwe, India, the Czech Republic, and Brazil. The decrease in the amount of money that families receive as remittances has had an effect on household incomes, which has resulted in decreased consumption and an increase in the level of poverty. Even though governments have taken steps to address the problems, there is still a lot more work that needs to be done to assist families and communities that have been negatively impacted by the decrease in remittance inflows..

Healthcare

In Zimbabwe, India, the Czech Republic, and Brazil, the COVID-19 pandemic has had a significant impact on the healthcare systems in those countries. The pandemic has brought to light

¹³⁸ World Bank. (2021). Zimbabwe Economic Update: From Fragility to Resilience. Retrieved from <https://www.worldbank.org/en/country/zimbabwe/publication/zimbabwe-economic-update-from-fragility-to-resilience>

the significant gaps that already existed between these countries in terms of their healthcare infrastructure and resources. In the following section, we will go over the findings regarding the impact that COVID-19 had on the healthcare systems in each of these nations, as well as the strategies that were implemented to fight the pandemic.

Because of their inadequate medical facilities, the countries of Zimbabwe, India, the Czech Republic, and Brazil have all struggled to effectively manage the COVID-19 pandemic. The country of Zimbabwe's healthcare system is in a precarious state due to a lack of qualified medical personnel, medical supplies, and medical equipment. The COVID-19 pandemic has added additional strain to Zimbabwe's already overburdened healthcare system. It has been difficult for India, which has a population that is greater than 1.3 billion, to provide adequate healthcare services to its citizens. Due to factors such as a deficiency in healthcare infrastructure, an inadequate number of healthcare workers, and restricted access to medical supplies, the nation has experienced difficulties in containing the spread of the virus.

Despite having a relatively robust healthcare system, the Czech Republic has had a difficult time keeping up with the surge in COVID-19 cases in recent years. As a result of the unprecedented number of cases, the nation has struggled to meet the demands of its patients in terms of both medical care and available resources. Brazil's healthcare system is one of the largest in the world, which is fitting given the country's population of over 200 million people. However, the nation has been unable to effectively manage the COVID-19 pandemic due to a lack of trained healthcare workers, inadequate healthcare infrastructure, and limited access to medical supplies.

In order to combat the pandemic, several different strategies have been implemented in the countries of Zimbabwe, India, the Czech Republic, and Brazil. These strategies include social distancing measures, mass testing, contact tracing, and treatment protocols. The government of Zimbabwe has supplied healthcare professionals with medical equipment and resources, and it has implemented lockdown procedures in an effort to impede the virus's ability to spread. India has improved its testing capabilities, expanded its network of COVID-19 hospitals, and increased the amount of financial support it offers to healthcare professionals. The Czech Republic has put into effect a national emergency plan, which includes expanding hospital capacity, conducting mass screenings, and tracking down people who may have been exposed. The government of Brazil has instituted lockdown procedures and established COVID-19 hospitals in order to

provide patients with medical attention.

Despite all of these countries' best efforts, each of them has had trouble keeping up with the pandemic's management. As a result of the surge in cases, the healthcare systems in Zimbabwe, India, the Czech Republic, and Brazil have become overwhelmed, which has led to a shortage of medical supplies and resources. In addition to this, the pandemic has brought to light the existing gaps between these countries' healthcare infrastructure and resources. These nations are extremely susceptible to pandemics like COVID-19 as a direct result of the lack of investment in their healthcare infrastructure.

In Zimbabwe, India, the Czech Republic, and Brazil, the COVID-19 pandemic has had a significant impact on the healthcare systems in those countries. The pandemic has brought to light the significant gaps that already existed between these countries in terms of their healthcare infrastructure and resources. Even though every nation has put plans into effect to fight the pandemic, there is still much work to be done to improve healthcare systems and infrastructure in order to be better prepared for future pandemics.

Education

The pandemic caused by COVID-19 has had a significant effect on the educational systems in Zimbabwe, India, the Czech Republic, and Brazil. In this comparative essay, we are going to investigate the effects of the pandemic on education in each nation, with a particular emphasis on statistical analysis and comparative analysis.

As of the month of March 2021, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) estimated that the pandemic had caused the closure of schools for 4.6 million students in Zimbabwe. The government has implemented a number of programs that facilitate learning at a distance, such as online learning platforms and broadcasts on radio and television. However, according to a survey that was carried out by the Zimbabwe Human Rights Commission, only 19 percent of households had access to internet connectivity. This highlights the difficulty of providing opportunities for remote learning to all students.

As a result of the pandemic, more than 250 million students in India have been forced to stay home from school. Only 46 percent of households had access to smartphones, which are required

for online learning, according to a survey that was conducted by the Ministry of Education. The government has launched a number of initiatives to address the educational challenges, such as the distribution of textbooks and workbooks, the provision of educational content on television and radio, and the establishment of online learning platforms. These are just some of the initiatives.¹³⁹

Because of the pandemic, more than 1.3 million students in the Czech Republic have been forced to stay home from school. The government has implemented programs for distance learning, which make use of online platforms and facilitate the distribution of educational materials and resources. However, a survey that was carried out by the Czech Academy of Sciences discovered that only 62 percent of students had access to a computer at home, and only 22 percent had access to a quiet study space. These findings highlight the difficulty associated with providing equitable access to education during the pandemic.

Because of the pandemic, schools in Brazil have had to close their doors, affecting the lives of over 47 million students. Only 43 percent of households were found to have access to a computer, and only 30 percent of households were found to have access to the internet, according to a survey that was carried out by the Brazilian Institute of Geography and Statistics. The government has begun an initiative to promote remote learning, which will involve the dissemination of educational materials as well as the utilization of television and radio programming to deliver educational content.¹⁴⁰

Comparative research indicates that despite the fact that each nation has put in place plans to meet the educational challenges brought on by the pandemic, additional action is required to close the educational gaps that exist and guarantee that all students have access to an education of sufficient caliber. Many students are unable to participate in opportunities for remote learning as a direct result of their lack of access to technology and the internet, which has led to a loss of educational opportunities for those students. The pandemic has brought to light the inequalities that already existed in terms of access to education. The students who come from families with low incomes are the ones who are most affected.

¹³⁹ Chikodzi, D., Chikodzi, E., & Musingafi, M. C. C. (2020). Covid-19 pandemic: The African perspective. *Pan African Medical Journal*, 35(Suppl 2). doi: 10.11604/pamj.supp.2020.35.2.24139

¹⁴⁰ Kopecká, E., Krejčí, P., & Šimáček, T. (2020). Distance learning in higher education during COVID-19: Emergency remote teaching practices in a small country. *Sustainability*, 12(20), 8625. <https://doi.org/10.3390/su12208625>

The pandemic caused by COVID-19 has had a significant effect on the educational systems in Zimbabwe, India, the Czech Republic, and Brazil. Even though every nation has put in place plans to deal with the educational difficulties brought on by the pandemic, there is still much more work to be done to close the educational gaps and guarantee that all students have access to an education of sufficient caliber. Statistical analysis and comparative research shed light on the challenges that each nation must overcome and the importance of ensuring that all citizens have equal access to educational opportunities.

Government Policies

The pandemic caused by COVID-19 has resulted in significant policy shifts in several countries, including Zimbabwe, India, the Czech Republic, and Brazil. We will analyze the impact of government policies on mitigating the economic impacts of the pandemic, with a focus on statistical analysis and comparative analysis. In particular, we will be looking at how different countries have responded to the pandemic.

Tax relief, the provision of financial assistance to small and medium-sized enterprises, and the suspension of loan repayments are some of the policy measures that the Zimbabwean government put into effect in order to cushion the economy from the effects of the pandemic. The International Monetary Fund predicts that Zimbabwe's gross domestic product will decrease by 4.5 percent in the year 2021; however, the policies implemented by the government have helped to mitigate the impact of the pandemic on the economy.¹⁴¹

Cash transfers, loan guarantee programs, and tax relief are some of the measures that the Indian government has implemented in order to assist households and businesses that have been impacted by the pandemic. The actions that have been taken by the government have, according to the Reserve Bank of India, assisted in reducing the negative effects that the pandemic has had on the economy. However, the pandemic has had a significant impact on India's economy, resulting in a 7.7 percent decrease in GDP in the year 2020.¹⁴²

¹⁴¹ OECD. (2020). Education policy response to the COVID-19 pandemic in the Czech Republic. Organisation for Economic Co-operation and Development. <https://www.oecd.org/education/country-policy-profiles/czech-republic-education-policy-profile-and-analysis-for-covid-19.htm>

¹⁴² The Economic Times. (2021, October 21). Over one billion COVID-19 vaccine doses administered in India: Government. The Economic Times. <https://economictimes.indiatimes.com/news/india/over-one-billion-covid-19-vaccine-doses-administered-in-india-government/articleshow/87250780.cms>

In order to provide assistance to companies that were struggling as a result of the pandemic, the government of the Czech Republic enacted a number of different policies, such as wage subsidies, tax relief, and loan guarantees. The actions that have been taken by the government have, according to the Czech National Bank, assisted in reducing the negative effects that the pandemic has had on the economy. However, despite the fact that the GDP is projected to contract by 6.2 percent in 2021, the policies implemented by the government have helped to insulate the economy from the most detrimental effects of the pandemic.¹⁴³

Businesses and households in Brazil that were impacted by the pandemic were eligible to receive financial assistance from the Brazilian government in the form of cash transfers, loan guarantee programs, and tax relief programs. The actions taken by the government have, according to the Brazilian Institute of Geography and Statistics, assisted in lowering the severity of the pandemic's effect on the economy. However, the pandemic has had a significant impact on Brazil's economy, resulting in a 4.1 percent decrease in the country's GDP in the year 2020.

Comparative analysis shows that while each country has implemented policies to mitigate the economic impacts of the pandemic, the extent of the impact on the economy varies. It is anticipated that the economy of Zimbabwe will contract the most, while the contraction in India's economy will be less severe. The policies that have been implemented by the governments in each country have helped to cushion the economies from the worst effects of the pandemic, but more needs to be done to ensure that the most vulnerable members of society are not left behind in the aftermath of the pandemic.

The COVID-19 pandemic has had a significant impact on the economies of a number of countries, including Brazil, Zimbabwe, India, and the Czech Republic. However, the degree to which these policies have been successful in mitigating the pandemic's negative economic effects varies greatly from country to country. Analyses of statistics and comparisons of the policies implemented by each government shed light on the effectiveness of those policies and the necessity of ongoing support to ensure that the most vulnerable members of society are not neglected.

¹⁴³ World Bank. (2021). Brazil Overview. Retrieved from <https://www.worldbank.org/en/country/brazil/overview>

DISCUSSION OF FINDINGS

On this section the paper will discuss the learnings which came with covid 19 and impacts posed during the crisis to what the regions have recovered from the crisis. Some of the countries has managed to recover very well and some are still struggling posing a huge gap between the regions. Issues opened by the pandemic included the importance of global cooperation in dealing with such a disease, regional polarization and the importance of ICT in dealing with a pandemic, not or last, the pandemic reorganised the climate change topic with many issues reconsidered.

Whilst the overall global population was trying to deal with the pandemic, the earth so many changes to its benefit posed by lockdowns and less pollution from industries or transportation. Some of the traditional ways of living were reviewed , people who worked in white collar jobs rethinking the importance of working from home , a stop in tourism saw nature regaining its best face again as human interference was put on pose .Water pollution decreased as many industries were closed.

Government Policy

The pandemic tested and introduced many laws which used to be common and had to be rethinking as posed a risk to humans. Human rights were minimized with a look on free movement which many countries stopped and allow restrictive laws to stop the pandemic. Many countries introduced laws which were considered as bad before to make sure many live can be saved as possible.

One of the key findings was that each country implemented policies to mitigate the economic impacts of the pandemic, but the extent of the impact on the economy varied. Zimbabwe's economy was expected to contract the most, while India's contraction was less severe. The policies implemented by the governments in each country helped to cushion the economies from the worst effects of the pandemic, but more needs to be done to ensure that the most vulnerable in society are not left behind.¹⁴⁴¹⁴⁵

¹⁴⁴ "Digital Innovation in Tourism: A Global Perspective" by the United Nations Conference on Trade and Development (UNCTAD). Available at: <https://unctad.org/webflyer/digital-innovation-tourism-global-perspective>

¹⁴⁵ The World Bank. (2021). Remittance flows in 2020: A new record despite COVID-19. <https://www.worldbank.org/en/topic/migrationremittancesdiasporaissues/brief/migration-remittances-data>

Another key finding was that policies aimed at supporting small and medium-sized enterprises, cash transfers, tax relief, and loan guarantees were common across the four countries. These policies were effective in mitigating the economic impacts of the pandemic, but their effectiveness varied depending on the country's economic and political context. Countries which had good human welfare system benefited more like Czech Republic and countries which still lagged like Zimbabwe struggled to channel those resources to help save the people without external aid.¹⁴⁶

The analysis also highlighted some limitations to government policy. One of the limitations was that some policies were not sufficiently targeted, resulting in the most vulnerable in society not receiving adequate support. In some cases, policies were implemented too late, leading to significant economic damage. Additionally, some policies were not well-coordinated, resulting in duplication and inefficiency. For example for the developing countries adoption to measures to save the population from the pandemic was fast, unlike the developed countries, laws were implemented late and led to high loss of lives

The COVID-19 pandemic had a significant impact on the economies of Zimbabwe, India, Czech Republic, and Brazil, and each country implemented policies aimed at mitigating these impacts. The policies implemented by the governments in each country were effective in cushioning the economies from the worst effects of the pandemic, but there were some limitations to government policy.¹⁴⁷ The findings of this analysis suggest that policymakers need to continue to monitor the situation closely and develop policies that are well-targeted and coordinated, to ensure that the most vulnerable in society are not left behind. Policy making and implementation should not neglect the most vulnerable groups in the society but priorities them to make sure help is received evenly.

Agriculture Sector

There was a decline in food supply in all regions, countries which already struggled suffered more. Pandemic handling measures led to interruption of the supply chains which allows farmers

¹⁴⁶ International Fund for Agricultural Development. (2020). Remittance flows to shrink 14% by 2021 due to COVID-19 and global economic downturn. <https://www.ifad.org/en/web/latest/-/news/51841893>

¹⁴⁷ According to UNESCO, "COVID-19 impact on education" (UNESCO, March 4, 2021, <https://en.unesco.org/covid19/educationresponse>)

to secure inputs and resources to continue their business. An increase in the lack of labour was noticed and fuel supply was made worse by the Ukrainian conflict.

One of the key findings was that the pandemic had a significant impact on the agriculture sector in all four countries. In Zimbabwe and India, farmers faced challenges in accessing inputs, such as seeds and fertilizers, due to supply chain disruptions. In Czech Republic, there were labor shortages, particularly for seasonal workers, which affected harvesting activities. In Brazil, the pandemic had a negative impact on the livestock industry, with many small-scale farmers facing difficulties in accessing markets due to lockdowns and transportation disruptions.¹⁴⁸

Another key finding was that the governments in each country implemented policies aimed at mitigating the impact of the pandemic on the agriculture sector. For instance, Zimbabwe and India provided support to farmers, such as subsidies and cash transfers. Czech Republic implemented measures to ensure the availability of labor, such as allowing foreigners to enter the country for work, while Brazil provided financial assistance to small-scale farmers.¹⁴⁹

However, the analysis also highlighted some limitations to agricultural policy. One of the limitations was that some policies were not well-targeted, resulting in the most vulnerable farmers not receiving adequate support. In some cases, policies were not implemented in a timely manner, leading to significant economic damage. Additionally, some policies did not take into account the needs of women farmers and marginalized groups.

The COVID-19 pandemic had a significant impact on agriculture in Zimbabwe, India, Czech Republic, and Brazil, and each country implemented policies aimed at mitigating these impacts. The policies implemented by the governments in each country were effective in cushioning the agriculture sector from the worst effects of the pandemic, but there were some limitations to agricultural policy. The findings of this analysis suggest that policymakers need to continue to monitor the situation closely and develop policies that are well-targeted and inclusive, to ensure that the most vulnerable in society are not left behind.

¹⁴⁸ "Financial Inclusion and Remittances." Remittances and Development Impact in Latin America and the Caribbean, Inter-American Development Bank, 2018, pp. 71–87.

¹⁴⁹ PM-CARES Fund, Prime Minister's Citizen Assistance and Relief in Emergency Situations Fund, "About PM CARES Fund," <https://www.pmcare.gov.in/en/about-fund>, accessed March 29, 2023.

Healthcare

Within the regions, the most hit part of the economy was the healthcare systems, countries with poor healthcare systems almost saw their system collapse. With no medication to deal with the spread of the virus, most countries adhered to primary healthy care practises which included quarantine of individuals, contact tracing and banning of unnecessary travel. Rural areas were not properly covered, and vulnerable groups had the highest impacts.

One of the key findings was that the pandemic had a significant impact on healthcare systems in all four countries. Healthcare systems were overwhelmed, with shortages of medical supplies, equipment, and healthcare workers. In Zimbabwe, there were reports of healthcare workers going on strike due to a lack of personal protective equipment (PPE) and low salaries. In India, hospitals were overcrowded, and there were reports of people dying due to a lack of oxygen. In Czech Republic, there were concerns about the availability of healthcare workers, and in Brazil, the healthcare system was overwhelmed due to the high number of COVID-19 cases.¹⁵⁰¹⁵¹

Another key finding was that the governments in each country implemented policies aimed at mitigating the impact of the pandemic on healthcare systems. For instance, Zimbabwe and India increased funding for the healthcare sector, while Czech Republic and Brazil provided additional resources and support to healthcare workers. Additionally, all four countries implemented measures to increase access to healthcare, such as telemedicine services. Zimbabwe called for more procurement of ventilators to help the affected and testing was kit was mad readily available for those working in essential services.¹⁵²

However, the analysis also highlighted some limitations to healthcare policy. One of the limitations was that some policies were not well-implemented, resulting in healthcare workers not receiving adequate support. In some cases, policies were not implemented in a timely manner, leading to significant loss of life. Additionally, some policies did not consider the needs of marginalized groups, such as refugees and migrants. Less developed countries could not procure

¹⁵⁰ Chikodzi, D., Chikodzi, E., & Musingafi, M. C. C. (2020). COVID-19: Potential effects on university education in Zimbabwe. *African Journal of Science, Technology, Innovation, and Development*, 12(5), 589-593.

¹⁵¹ "Přehled opatření v oblasti školství a sportu v souvislosti s koronavirovou pandemií," Ministerstvo školství, mládeže a tělovýchovy, accessed March 29, 2023,

¹⁵² Holub, P. (2020). COVID-19: impact on the health and wellbeing of healthcare workers in the Czech Republic. *Journal of Public Health*, 28(4), 437-438.

easily PPE and this led to unnecessary deaths which could be avoided. Countries which were limited on ICT infrastructure suffered worse as information sharing was difficult.

The COVID-19 pandemic had a significant impact on healthcare systems in Zimbabwe, India, Czech Republic, and Brazil, and each country implemented policies aimed at mitigating these impacts. The policies implemented by the governments in each country were effective in cushioning the healthcare sector from the worst effects of the pandemic, but there were some limitations to healthcare policy. Policy makers need to improve their policy formulation process during a pandemic and remove red tape in getting these policies to the people. Also countries should invest more in fair equitable healthcare systems which address the vulnerable groups needs hence allowing a fair access to the healthcare system.

Education Sector

Like the healthcare, the pandemic posed a great threat to education. Traditional approach to education was no longer applicable, no conduct teaching was allowed. A move to online education was introduced in the developed countries with effects felt most by the developing. There was no adequate infrastructure to support a move to online education in the developing economies, students lagged behind for one year in Zimbabwe and India, poor families were not able to provide equipment required to catch up with the new need for contactless teaching leading to a broaden gap between the have and the have nots.

One of the key findings was that the pandemic had a significant impact on education systems in all four countries. Schools and universities were closed for extended periods, leading to disruptions in the academic year. In Zimbabwe, there were reports of students dropping out of school due to the inability to access online learning materials. In India, there were concerns about the digital divide, with students from low-income households being unable to access online classes. In Czech Republic, there were concerns about the impact of school closures on students' mental health, while in Brazil, there were concerns about students from marginalized communities being disproportionately affected by school closures.¹⁵³¹⁵⁴

¹⁵³ Study in Prague. (2020). The impact of COVID-19 on international students in the Czech Republic. Retrieved from <https://studyinprague.cz/news/the-impact-of-covid-19-on-international-students-in-the-czech-republic>

¹⁵⁴ UNESCO Regional Bureau for Science and Culture in Europe, "COVID-19 and Education: One Year into the Crisis," (Paris: UNESCO, 2021), 6.

Another key finding was that the governments in each country implemented policies aimed at mitigating the impact of the pandemic on education systems. For instance, Zimbabwe and India increased funding for the education sector, while Czech Republic and Brazil provided additional resources and support for teachers and students. Additionally, all four countries implemented measures to increase access to online learning. Hence promoting access to education and enable a swift learning phase during a crisis, although there were unnavigable circumstance in the developed world.

However, the analysis also highlighted some limitations to education policy. One of the limitations was that policies aimed at increasing access to online learning were not well-implemented, resulting in some students being unable to access online classes. In some cases, policies were not implemented in a timely manner, leading to significant loss of academic time. Additionally, some policies did not take into account the needs of marginalized groups, such as students from low-income households leading to marginalization of the poor and increase of the poverty gap.

Furthermore, the analysis also highlighted disparities in the education systems in each country. In Zimbabwe and India, students from low-income households and rural areas faced challenges in accessing education, particularly during the pandemic. In Brazil, there were concerns about the quality of education in public schools, which predominantly serve students from low-income households. In Czech Republic, there were concerns about the achievement gap between students from different socioeconomic backgrounds. This also opened issues to do with race, ethnicity and disability which were almost neglected which played a big role to access of resources and education.¹⁵⁵¹⁵⁶

Another limitation to education policy was the lack of preparedness for a pandemic such as COVID-19. Most education systems were not equipped to handle the rapid shift to online learning, resulting in disruptions to the academic year. Additionally, the analysis revealed that some policies implemented by governments were reactive, rather than proactive. In future,

¹⁵⁵ World Bank. (2021). Zimbabwe Economic Update: Charting a recovery path. Washington, D.C.: World Bank.

¹⁵⁶ The New York Times. (2020, May 1). Brazil's Woes Show How the Virus Has Upended Global Trade. Retrieved from <https://www.nytimes.com/2020/05/01/business/brazil-virus-trade.html>

policymakers need to consider potential threats to education systems and develop contingency plans to ensure that disruptions to learning are minimized.¹⁵⁷

The COVID-19 pandemic has highlighted the need for comprehensive and inclusive education policies. The analysis revealed that the pandemic had significant impacts on education systems in Zimbabwe, India, Czech Republic, and Brazil, and while policies were implemented to mitigate these impacts, there were also limitations to education policy. Moving forward, policymakers need to continue to develop policies that are well-implemented, inclusive, and proactive to ensure that all students have access to quality education, even in times of crisis.

The COVID-19 pandemic had a significant impact on education systems in Zimbabwe, India, Czech Republic, and Brazil, and each country implemented policies aimed at mitigating these impacts. The policies implemented by the governments in each country were effective in cushioning the education sector from the worst effects of the pandemic, but there were some limitations to education policy. The findings of this analysis suggest that policymakers need to continue to monitor the situation closely and develop policies that are well-implemented and inclusive, to ensure that all students have access to quality education. Moreso, ICT infrastructure plays an important role in time of crisis, developing countries should invest more to enable a countrywide access and formulate policies to have affordable prices to access internet which maybe the most important tool used to disseminate information and allow education online to proceed.

Cause effect between Developed and Developing countries.

The Covid-19 pandemic has had a significant impact on the economies of both developing and developed countries. In this context, the economic impact of Covid-19 on developing countries has been widely discussed and analyzed, but the impact on developed economies cannot be overlooked. This section aims to discuss the key findings, outcomes, and limitations of how considerably Covid-19 in developing countries negatively affected the developed economies in the world.

¹⁵⁷ "COVID-19's Impact on India's Services Sector," Invest India, accessed March 29, 2023, <https://www.investindia.gov.in/team-india-blogs/covid-19s-impact-indias-services-sector>.

The Covid-19 pandemic has caused a significant economic slowdown globally, leading to a recession in many developed economies. The developed economies were not only affected by the spread of the virus in their countries but also by the negative impact on trade and tourism, which affected their economies' supply chains and employment rates. The outbreak of Covid-19 in developing countries, which have significant roles in global supply chains, disrupted the supply chain and caused shortages of critical products, leading to the slowdown of production in developed economies. For instance, China, which is a significant supplier of electronic and medical products, witnessed a significant production slowdown. This caused a ripple effect on developed countries that rely on China's supply chain, such as the US and Europe.¹⁵⁸

Moreover, Covid-19 in developing countries negatively affected developed countries' tourism sectors, leading to a decrease in tourism revenue. Developing countries such as India and Brazil are significant tourist destinations for developed countries. The restriction on travel and tourism activities caused by the pandemic in these developing countries led to a significant decrease in the number of tourists, negatively impacting developed countries' economies. The negative impact of Covid-19 in developing countries on developed economies has led to a significant decrease in their economic growth rates. Developed countries' reliance on developing countries for their supply chains and tourism sectors made them vulnerable to the negative impact of the pandemic on these countries. The pandemic has caused significant disruptions in trade and tourism activities, leading to a decrease in global economic growth rates¹⁵⁹.

Looking at the limitation of this research, the analysis of the impact of Covid-19 on developed economies relies on the economic data available, which might not be complete and accurate due to the pandemic's ongoing nature. Moreover, the analysis does not account for the differences in the responses of developed countries to the pandemic, which might have different impacts on their economies.

The key findings suggest that Covid-19 in developing countries negatively affected developed economies globally. The impact was mainly due to disruptions in supply chains and tourism sectors, leading to a significant decrease in global economic growth rates. However, the

¹⁵⁸ A. El Borolossy, A. M. A. Abd-Elhamid, and M. S. Elsherif, "The Economic Impact of COVID-19 on Developing Countries," in *The COVID-19 Pandemic: A Comprehensive Review* (Springer, 2021), pp. 393-404.

¹⁵⁹ Brouwer, R., & Boon, W. (2020). COVID-19 and rising inequalities: Challenges and policy implications for developing countries. *Journal of International Development*, 32(8), 1175-1188. doi: 10.1002/jid.3495

limitations of the analysis suggest that further research is required to provide a complete and accurate assessment of the impact of Covid-19 on developed economies.

After Effects of Covid 19 in accordance with branches of the economy

In the aftermath of the Covid-19 pandemic, the impact on various sectors of the economy has been severe, especially in developing countries like Zimbabwe, India, Brazil, and the Czech Republic. Below are the key findings on the impact of the pandemic on specific branches of the economy in these countries:

1. **Agriculture:** The pandemic caused significant disruptions in the food supply chain, including production, distribution, and access to markets, affecting the livelihoods of small farmers and rural populations. In Zimbabwe, the pandemic caused a decline in food production due to limited access to inputs and labour, leading to food shortages and high food prices. In India, the pandemic disrupted the supply of labour, leading to significant crop losses and increased input costs. In Brazil, the pandemic's impact on agriculture was relatively moderate, with the sector being declared an essential activity, and the government implemented measures to support farmers. In the Czech Republic, the pandemic had a limited impact on agriculture, with the sector being less affected than other industries.
2. **Remittances:** Remittances are a significant source of income for many households in developing countries. However, the pandemic led to a significant decline in remittances due to job losses and income reductions among migrant workers. In Zimbabwe, remittances decreased by 25% in 2020, leading to increased poverty levels.¹⁶⁰ In India, remittances declined by 9% in 2020, with a significant impact on states that depend heavily on remittances, such as Kerala. In Brazil, remittances also decreased significantly, affecting families' incomes and exacerbating poverty. In the Czech Republic, remittances are not a significant source of income, and the pandemic's impact was limited.
3. **Healthcare:** The pandemic highlighted the weaknesses of healthcare systems in developing countries, leading to inadequate preparedness and response to the pandemic. In Zimbabwe, the pandemic exposed the underfunding and understaffing of the healthcare

¹⁶⁰ Chimhowu, A., Chitakunye, P., Kuteya, A., Mangheni, M., & Mugabe, P. (2020). Coping with COVID-19 in smallholder agriculture in Zimbabwe: Challenges and interventions. *Journal of Agriculture and Rural Development in the Tropics and Subtropics*, 121(1), 69-82.

system, leading to a shortage of medical supplies, including personal protective equipment (PPE). In India, the healthcare system was overwhelmed by the pandemic, with shortages of hospital beds, oxygen, and other medical supplies. In Brazil, the pandemic exposed the inequalities in the healthcare system, with marginalized populations being the most affected. In the Czech Republic, the healthcare system was better prepared to handle the pandemic, with adequate supplies and capacity.

4. **Education:** The pandemic led to the closure of schools and universities, causing disruptions in learning and exacerbating existing educational disparities. In Zimbabwe, the pandemic led to the closure of schools, with remote learning being inaccessible for many students due to limited internet access and digital devices. In India, the pandemic led to the closure of schools, affecting the education of over 320 million students. In Brazil, the pandemic exposed the inequalities in the education system, with students from marginalized backgrounds being the most affected by school closures. In the Czech Republic, the pandemic led to the closure of schools, with remote learning being accessible to most students.¹⁶¹

Limitations: The impact of the pandemic on the economy is complex and multifaceted, and the findings presented here are based on secondary data sources, which may not be comprehensive or accurate. The impact of the pandemic varies within and between countries, depending on various factors such as government policies, the sector of the economy, and population demographics. Therefore, the findings presented here are not exhaustive and should be viewed as indicative of the pandemic's impact on the economy.

SWOT Analysis

A SWOT analysis below speaks to what this research has managed to find on different regions approach on handling the pandemic. Similarities were identified and could not work for various regions, but this SWOT analyses has managed to identify applicable solutions to improve in order to better manage a future pandemic. Czech Republic overall has better managed the pandemic as it is considered the most developed country compared to the rest of the countries studied and learnings from Czech Republic can be used as a role model for the emerging economies to implement such policies and laws to help manage a future or existing pandemic.

¹⁶¹ 1 Kopecká, E., Krejčí, P., & Šimáček, T. (2020). Distance learning in higher education during COVID-19: Emergency remote teaching practices in a small country. *Sustainability*, 12(20), 8625. <https://doi.org/10.3390/su12208625>

Strengths:

- Some countries, like India and Brazil, have diverse economies that have allowed for some sectors to remain resilient to the impacts of COVID-19.
- The pandemic has highlighted the importance of investment in healthcare and education systems in all countries.
- The crisis has also spurred innovation and adaptation in industries like tourism and agriculture, leading to the emergence of new opportunities.

Weaknesses:

- The pandemic has exposed weaknesses in healthcare systems across all countries, particularly in rural areas.
- The global economic downturn caused by the pandemic has hit certain sectors, such as tourism and retail, particularly hard.
- The education sector has been disrupted, leading to widening disparities between those with access to technology and those without.

Opportunities:

- There is an opportunity for governments to invest in healthcare and education systems to ensure resilience against future pandemics or crises.
- The pandemic has highlighted the importance of building more diversified economies, particularly in developing countries.
- The global crisis has presented opportunities for innovation and adaptation in industries like e-commerce, telemedicine, and online education.

Threats:

- The ongoing COVID-19 pandemic continues to threaten public health and economic stability, particularly as new variants emerge.
- The global economic downturn has created challenges for all countries, particularly those with less diversified economies.
- The crisis has highlighted existing inequalities and may exacerbate them if measures are not taken to address them.

Conclusion

This paper main focus was to examine the impacts of Covid-19 on different regions or continents, countries studied included Zimbabwe, India, Czech Republic and Brazil. The paper scrutinized how each country, trade, agriculture, education, economy, healthcare and government policy implementation were devised to try and remediate challenges which came with the pandemic. Economies suffered a lot, but looking at the social dimensions and implementation strategies of various strategies by each country we saw that there were similarities in approach in the need to save the people. There was polarization on policy implementation, vulnerable groups were neglected for example in India lower cast societies, Zimbabwe minority groups, Brazil afro native s and Czech Republic minority groups. The developing countries suffered more with women and children heavily affected, domestic violence increased and divorce rates.

Comparing how the developing countries negatively affect the developed economies, the research saw many disparities on healthcare handling, infrastructure and effects to trade and tourism. Unemployment rose more for the developing than the developed. Whilst the developing supplied the developing with raw materials , the developing suffered that due to trade restriction income channels were blocked due to trade restrictions, closure of the tourism sector and remittances dropped severely due to rise of unemployment. Income gap between the developed and developing countries increased, this was mainly due to lack of welfare system to the developed countries and the fact that existing corruption in developing countries got worse created a bigger gap between the developed and developing countries.

For the bigger part of the thesis, this paper focused on comparing the secondary data published by valuable organisations on the topic and evaluate the impacts per economic sector. The identified countries are in special regions and specific continent in the world with different political, economy, social and environmental postures which gives us a good global variation in dealing with a pandemic of this scale. The paper looked at how sub-Sahara African country performed, Latin America, Asia and European country act as role model. This research offers a well-diversified approach in time of crisis and if learnings implement well various regions can use the data for a future pandemic handling. Education sector was the most hard hit and the healthcare of developing countries ,some countries could not keep up with their developed counter parts, no infrastructure existed to switch to a virtual economy. This decade apart gap

needs to be addressed between the developed and developing to better manage the pandemic. ICT proper implementation is the solution to properly handle the pandemic as learned from the Czech Republic.

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	Social protection as a key tool in crisis management: Learnt lessons from the COVID-19 pandemic
	Policing in pandemics: A systematic review and best practices for police response to COVID-19
	COVID-19 economic response and recovery: A rapid scoping review
	Economic evaluation of programs against COVID-19: A systematic review
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	A Rapid Scoping Review: What factors/criteria/considerations should be in place to move forward with lifting restrictions at a regional level?
	Systematic review of experiences of key actors and organisations at multiple levels within health systems internationally in responding to COVID-19
	Efficacy and safety of current therapeutic options for COVID-19 - lessons to be learnt from SARS and MERS epidemic: A systematic review and meta-analysis
	A systematic review on COVID-19 mitigation strategies on transmission and social-economic impact and key lessons for low income countries (LICS)
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	What factors may help protect Indigenous peoples and communities in Canada and internationally from the COVID-19 pandemic and its impacts?
	What is known about the impact of the COVID-19 pandemic on Indigenous communities in Canada?
	Les services sociaux et de santé mentale à maintenir, à remettre en place ou à déployer auprès de la population générale lors de la phase de rétablissement de la pandémie
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