

# **Pandemic COVID-19 and Macroeconomic Indicators: A Study of the Structural Factors Exacerbating Palestine's Economic Crisis**

## **Abstract**

This paper explored and examined the impact of the (COVID-19) pandemic on selected macroeconomic indicators and variables in Palestine, as well as its economic impact and structural factors that exacerbate the coronavirus (COVID-19) pandemic issue, are examined in this paper. This study uses data from the Palestine Monetary Authority (PMA) and the World Bank to assess the link between the exchange rate, crude oil price, inflation, and economic growth in Palestine using Johansen-Juselius multivariate cointegration techniques. The findings show that a combination of falling oil prices, high inflation, exchange rate, and spillovers from the (COVID-19) pandemic outbreak triggered the economic downturn in Palestine, which not only reduced demand for oil products but also halted economic activity when social distancing policies were implemented. The government responded to the situation by assisting companies and a limited number of homes afflicted by the coronavirus (COVID-19) epidemic. As a result, the report recommends that the government invest inadequate digital infrastructure to ease the shift from "face-to-face" business operations to "digital or online" business activities, which can assist the digital economy to expand.

**Keywords:** COVID-19, Macroeconomic Indicators, Economic Crisis, Johansen Co-integration, Palestinian Economy, State of Palestine.

## **1. Introduction**

In December 2019, the World Health Organization (WHO) received reports of clusters of pneumonia patients with unclear origins in Wuhan, Hubei Province, China. The causal agent was later identified as a unique strain of Coronavirus (SARS-COV 2) by Chinese officials. The Director-General of the WHO designated the (COVID-19) outbreak a Public Health Emergency of International Concern (PHEIC) in January 2020, and described it as a pandemic on 11 March 2020, on the advice of the International Health Regulation Emergency Committee. The epidemic has been documented on every continent, with Egypt reporting the first case in Africa in February 2020. Over 52.9 million confirmed cases have been reported worldwide, with over 1.2 million fatalities.

(COVID-19) was quickly transported into Asia, which is a very sensitive continent. As of the time of writing this research, there have been 874,036 confirmed cases of (COVID-19) in Africa, with 524,557 recoveries and 18,498 deaths (World Health Organization, 2020). This equates to a recovery rate of 46.3 per cent and a death rate of roughly 4.3 per cent, respectively.

However, there has been much discussion over the causes of the low number of (COVID-19) cases reported in Asia (World Bank, 2021; World meter, 2020; Diop, Asongu, 2020). Given the region's lack of public health infrastructure, government structure, permeable borders, and weak institutions, among other things, this appears paradoxical. It was stated that the low number of verified (COVID-19) cases in Asia and Africa was due to a lack of testing capability rather than geographic location.

Palestine is one of the 210 countries that have been affected worldwide. In March 2020, the first case was verified in Palestine. The index case was a 44-year-old Italian person who returned from Milan on February 24, 2020, and appeared at a health institution on February 26, 2020. Following confirmation of the index case, 216 persons were identified as potential contacts who needed to be followed up with. On March 9, 2020, one of the remaining 188 contacts was verified to be positive for (COVID-19), while 48 left Palestine.

The unique Coronavirus case fatality rate has been estimated by the (WHO) to be about 2% [6], significantly lower than the Middle East Respiratory Syndrome MERS (33%), and Severe Acute Respiratory Syndrome SARS (11%) (World meter, 2020).

The virus's incubation period can last as little as 2 days or as long as 14 days (World Health Organization (WHO): 2-10 days; China's National Health Commission (NHC): 2-14 days; United States Centers for Disease Control and

Prevention (CDC): 10-14 days), during which the patient is contagious but shows no symptoms (asymptomatic transmission).

(COVID-19) may infect people of all ages, although the elderly and those with pre-existing medical disorders (such as asthma, diabetes, or heart disease) tend to be more susceptible to falling seriously ill as a result of the virus. Coronavirus illness is communicated mostly by coughing or sneezing with an infected individual. It can also spread when a person comes into contact with a virus-infected surface or object and then contacts their eyes, nose, or mouth.

Patients infected with (COVID-19) are the major sources of infection. Asymptomatic instances, on the other hand, should be given attention since they may play a crucial part in the transmission process.

The major transmission pathways are respiratory droplets and contact (World Health Organization, 2021). The primary transmission vectors of (COVID-19) infection in children are close contact with symptomatic patients and asymptomatic people with prominent infection. (COVID-19) is a virus that affects people of all ages. Severe instances are more likely to occur in the elderly and those with underlying chronic conditions (World Health Organization, 2021). So far, all pediatric cases of (COVID-19) infection that has been verified in the lab have been mild, and no deaths have been reported.

According to (PMA), the incubation period for (COVID-19) infections ranges from 1 to 14 days, with the majority of cases falling between 3 and 7 days. The age of illness onset in pediatric patients ranged from 1.5 months to 17 years, with the majority of them have had close contact with infected individuals or being familial cluster cases. Some patients had gastrointestinal symptoms such as abdominal discomfort, nausea, vomiting, abdominal pain, and diarrhoea, while others had a fever, dry cough, and fatigue. A few patients had upper respiratory symptoms such as nasal congestion and running nose; others had gastrointestinal symptoms such as abdominal discomfort, nausea, vomiting, abdominal pain, and diarrhoea.

The majority of infected youngsters show just minor clinical symptoms. They have no fever or pneumonia symptoms and have an excellent prognosis. The majority of them recover within 1–2 weeks after the commencement of the condition. Few people will develop lower respiratory infections. There have been no positive infants delivered by (COVID-19)-infected women, and no neonatal cases have been recorded. Clinical symptoms in pediatric patients should be further characterized after collecting additional pediatric case data, it should be underlined. Furthermore, as pathogen analysis becomes more widely used, the number of confirmed infected patients will rise.

Furthermore, research from adults shows that severe patients frequently develop dyspnea one week following the commencement of the illness. Acute Respiratory Distress Syndrome (ARDS), septic shock, refractory metabolic acidosis, and coagulation malfunction can all occur in severe instances.

Even though no child deaths have been documented yet, the possibility of mortality should be recognized. ARDS and mortality instances occurred in infected children during the (SARS) and (MERS) outbreaks, even though clinical signs in pediatric patients are often less than in adult patients.

A differential diagnosis should be performed to distinguish between influenza virus, parainfluenza virus, adenovirus, respiratory syncytial virus, rhinovirus, and other viruses, as well as Mycoplasma pneumonia, chlamydia pneumonia, and bacterial pneumonia, as well as human metapneumovirus, (SARS) coronavirus, and other viruses. Infection of (COVID-19) with other viruses and/or bacteria should be considered while making a diagnosis.

Beyond the public health effects of regional or global emerging and endemic infectious disease outbreaks, according to [10], there are larger socioeconomic consequences that are typically overlooked in risk and impact assessments. Infectious illnesses that are endemic start off a complicated sequence of reactions in the economy. They are uncommon and severe occurrences, with a wide range of characteristics and volatility across time and between nations. Terrorism risk is determined by several elements that vary depending on the type of action.

The idiosyncratic character of endemic infectious illnesses is dependent on a variety of factors, including the magnitude and length of the event, the size and status of the local economy, the geographical areas impacted, population density, and the time of day the event occurred. If the expenses of mortality loss, chronically unwell cattle are offered prematurely at a discount, and treatment is easily traceable. Estimating indirect costs, such as diminished local labour productivity and/or the impact on foreign travel and commerce, may be a difficult process.

Given the foregoing, it will be impossible for a single researcher to investigate the impact of (COVID-19) on Palestine's economic growth. As a result, our study focused on a few macroeconomic factors. That is the price of crude oil, the exchange rate, and inflation. It also takes into account the structural issues that have exacerbated Palestine's economic predicament as a result of the (COVID-19) epidemic. It examines, among other things, healthcare infrastructure, the digital economy, and social welfare.

## 2. Literature Reviews

This section presents an overview of the (COVID-19) epidemic in Palestine, taking into account currency rate, crude oil price, and inflation rate movements. In addition, structural issues that exacerbate economic crises, as well as mitigating strategies, are discussed.

### 2.1 General Review of the COVID-19 Pandemic in Palestine

The Palestinian economy appears to have entered instability when (COVID-19) debuted in Palestine on February 27, 2020 (PCBS, 2020). (COVID-19) was designated a worldwide pandemic by the World Health Organization (WHO) thirteen days after its introduction from Italy, on March 11. As the virus continues to spread on an unimaginable scale both internationally and locally, official responses appear to be focused primarily on limiting the virus's spread within the country through social isolation policies such as closing educational institutions, limiting work and restricting people's movement, providing palliatives to the "vulnerable and poorest of the poor," imposition of nighttime curfews, and so on.

Many analysts feel that as long as the virus continues to spread, determining the extent and breadth of the pandemic's influence on the nation's social and economic life will be difficult, if not impossible, until the situation returns to normal (Dingl & Neiman, 2020). But what will be the outcome of the pandemic? What will be the long-term consequences? This ambiguity is prevalent, and it has instilled a feeling of dread among the general public, academics, and politicians. Despite the ambiguity surrounding the disease's origin, as the outbreak continues, various lines of research have arisen to explore the disease's macroeconomic effect at the global, continental, and national levels.

The study by (Ohia, C., Bakarey, A. S., & Ahmad, T., 2020), a follow-up to (Onyekwena, C., & E. Amara Mma, 2020), looks at seven different scenarios for how (COVID-19) might change over the next year. The paper mentioned that the disease's progression and economic impact are highly uncertain, making it difficult for policymakers to formulate appropriate macroeconomic policy responses.

The study's scenarios show that, despite the outbreak's containment, the impact on the global economy would be significant in the short term such as (Barro, R, Ursua, J., & Weng, J., (2020; Ozili, P.K. & Arun, T.G., 2020; Ogundele, K., 2020; Jacob, O. N., Abigeal, I., & Lydia, A. E, 2020), and there are some other recent studies of global concern. Furthermore, and review the economic impact of the (COVID-19) crisis across industries, and countries are investigated.

According to the report, a median decrease of -3.6 per cent in GDP is expected in 2020 in the sample of 30 nations studied. In some scenarios, the report predicts that GDP would decline by more than 15%, and in certain nations, by more than 22%. According to (Orlik et al, 2020), coronavirus might cost the world economy \$2.7 trillion. "GDP falls by 2% below the standard for the globe, 3.5 per cent for underdeveloped nations, and 1.8 per cent for industrial countries in a baseline global pandemic scenario (Muhammad, F., Abdulkareem, J. H., & Chowdhury, A. A., 2017).

In what appears to be a veiled critique of the public media and scholarly papers for focusing mostly on the (COVID-19) pandemic's worldwide socio-economic impact. Furthermore, it "is merely one aspect of the overall picture of economic effect, (Adenomon, M. O., & Maijamaa, B, 2020). The impact of the pandemic is predicted to be severe in Asia and the Middle East, given the continent's high illness burden, poorly built infrastructure and safety nets, and inadequate health systems. Using the same logic, a country-level impact study is not only desirable but also necessary for policymakers to follow. For various reasons, the pandemic's projected worsening impact on the Palestinian economy is unavoidable.

To begin with, the economy has yet to fully recover from the effects of the 2016 recession. Second, the economy is heavily reliant on crude oil, whose price has dropped dramatically on the international market. Finally, foreign exchange reserves were reduced from \$45.1 billion at the end of 2019 to \$35.3 billion at the end of March 2020. Fourth, since 2015, the country's debt load has been increasing. Fifth, inflation remains in double digits, putting pressure on the naira. Finally, the capability of the healthcare system is appalling. These and other reasons have heightened fears and doubts about the impact (COVID-19) would have on the Palestinian economy. According to (PMoH, 2020), Palestine's economic collapse was brought on by a combination of falling oil prices and other factors and the spillovers from the (COVID-19) outbreak.

### 2.2 COVID-19 Pandemic and Selected Macroeconomic Fundamentals

According to (Ogundele, K., 2020; PMoH, 2020), imposing some tight rules as a way of limiting the spread of the coronavirus may have some virtues; nevertheless, it also imposes some constraints on many areas of a nation's life, particularly its economic activities. Other impacts could be measured from the performance of the economy's

macroeconomic fundamentals such as economic growth, general price level (consumer price index or inflation), an exchange rate (strength of local currency), interest (bank lending) rate, private investments, employment, and stocks and global oil prices, among others (PMA, 2020).

These economic losses might hurt overall economic activity, especially since the (COVID-19) pandemic was not factored into the budgeting process (MoNE, 2020). As a result, it's required to look at the historical trend of some of these fundamentals since the WHO declared the pandemic, to determine the impact on the Palestinian economy via the link between the (COVID-19) and these fundamentals. In this portion, four important factors are discussed: global crude oil prices, foreign currency rate, all-share index, and inflation.

### **2.3 COVID-19 Pandemic Cases and Exchange Rate**

According to (PMA, 2020), Palestine's currency rate regime has been a controlled float for many years, with official prices established by the top monetary authority rather than market forces of demand and supply. The substantial existence of the parallel market (sometimes referred to as the noisy 3%) in the Palestinian foreign currency market is one of the market's most distinguishing features, as it dominates the official rates while diminishing the apex monetary authority's influence over the market rates. In this sense, while there is normally an official rate (often fixed at a value for a lengthy period), many foreign currency traders and their clients rely heavily on parallel market prices. Speculations, which might include remarks made by the central bank regarding the official rate, generally drive the latter (PMA, 2021).

Most business-minded people, on the other hand, would prefer to deal with parallel market dealers to avoid the enormous paperwork that characterizes traditional banking (PMA, 2022). As a result, the parallel market-determined exchange rate and (COVID-19) both moved in lockstep. As the number of verified (COVID-19) instances grows, the exchange rate appears to devalue, with increasingly unpredictable changes as the number of confirmed cases grows. This might be caused by market speculations regarding the dollar's alternating surplus and deficit.

Furthermore, (PMA, 2021) suggested that as the epidemic continues, the Shekel's value would fall, forcing the (PMA) to choose between maintaining the status quo by allowing the official rate to stay unchanged or attempting to reduce the premium acquired by parallel market dealers. The former would need the (PMA) to pump additional dollars into the market, a move that may be onerous given that the country's main source of foreign profits – crude oil – is already suffering from the price fall.

Closing the premium, on the other hand, would result in further depreciation of the Shekel. While preserving the status quo during the epidemic might be costly and potentially unaffordable, devaluation is more likely and could lead to a rise in overall price levels (PMA, 2022)).

The (PMA) selected the latter, depreciating the Shekel from N306.5 to N360.5 and therefore leading to an increase in overall prices, with the inflation rate rising from 11.62 per cent in December 2019 to 16.12 per cent in January, 12.2 per cent in February, and 14.22 per cent in March 2020 (PMA Report - March 2020). The currency rate is a direct route for foreign inflation to enter Palestine. Depreciation will have an immediate effect on the local currency's buying power, as the Shekel value of imports will rise when the inflation rate of the country's trading partners migrates into the country, resulting in higher domestic prices of imported items. As a result, the pandemic might lead to inflationary pressures.

### **2.4 COVID-19 Pandemic Cases and Crude Oil Price**

The analysis of global oil prices is based on two key points: first, Palestine is the world's 26th largest crude oil importer, and the largest in the Middle East as of January 2020; second, Palestine's over-reliance on oil is concerning, with oil revenue accounting for more than 90% of the country's foreign exchange earnings). As a result, global oil price fluctuations are expected to have a substantial influence on the country's revenue and, more importantly, its economic activity (MoNE, 2020).

These shocks might be linked to events that affect global oil supply, such as the global oil collapse that occurred in 2016-2018 as a result of the shale oil revolution, sending crude oil prices below \$100 per barrel. Before the (COVID-19) pandemic, global oil prices stayed stable between 33.26 and 77.41 USD/barrel over the previous four years. The trend of oil prices about the (COVID-19) verified instances.

Following WHO's declaration of (COVID-19) as a pandemic, global oil prices fell sharply, owing to an alarming increase in the number of confirmed (COVID-19) cases and the rate of spread across nations, which subsequently crippled economic activity (partially or completely) in afflicted countries. Given that the majority of countries in the globe, including those that produce oil, Countries have already been decimated by the epidemic, and trade has been harmed due to an excess supply of global crude oil and a shortage of storage capacity, as well as an excess supply of

global crude oil without a comparable demand. The plunge has hit an all-time low, with some global crude oil prices falling into negative territory.

Given Palestine's reliance on crude oil exports, global oil prices, which are extremely unpredictable, have a considerable impact on its general price level, foreign exchange earnings, and gross domestic product (GDP). During a pandemic, however, higher volatility is predicted. Because crude oil accounts for a substantial amount of the country's foreign profits as well as federal government revenue, the oil price shock (in this case, the declaration of (COVID-19) as a pandemic) caused the worldwide oil price drop may jeopardize economic productivity.

As a result, the rise of (COVID-19) cases is anticipated to have a detrimental influence on economic growth via oil prices and government income.

This is compounded by the fact that several economic operations have been halted. Given that Palestine is a small and open economy that is heavily import-dependent (MoNE, 2020), there might be some type of imported inflation from bilateral partners on the overall price level. While there are fears that the epidemic would send the country into recession shortly, general pricing levels will be influenced as well.

## **2.5 COVID-19 Pandemic Cases and Inflation**

As a result of the (COVID-19) impacts, Palestine's inflation rate has risen to 16.77 per cent. Palestine's inflation rate grew by 16.81 per cent (year-on-year) in April 2020, according to data from the Palestinian Central Bureau of Statistics (PCBS). This is 0.06 per cent higher than the March 2020 rate of 16.33 per cent, and it is the largest increase since April 2018. Palestine's inflation rate has reached its highest level in 24 months as the country grapples with the economic crisis brought on by the (COVID-19) outbreak.

According to the Palestinian Central Bureau of Statistics (PCBS) latest CPI data, the inflation rate jumped to 16.71 per cent (year-on-year) in April 2020 from 16.33 per cent in March 2020. The index climbed by 1.02 per cent month over month in April 2020, 0.12 per cent more than the 0.48 per cent reported in March 2020.

### **2.5.1 Food Inflation**

In April 2020, the composite food index climbed by 0.07 points to 11.06 per cent, up from 12.66 per cent in March 2020. In April 2020, the carefully monitored component of the inflation index climbed by 1.18 per cent month over month, up 0.18 per cent points from the 0.76 per cent reported in March 2020. The increase in the food index was attributed to price rises in potatoes, yams, and other tubers, fish, oils and fats, meat, fruits, bread and cereals, and vegetables, according to the study.

### **2.5.2 Core Inflation**

According to (Adenomon and Maijamaa, 2020) Core inflation (all products excluding farm produce), which includes the costs of volatile agricultural produce, was 7.66 per cent in April 2020, up 0.21 per cent from 7.53 per cent in March 2020. The core sub-index grew by 0.58 per cent month over month in April 2020, compared to 0.4 per cent the previous month.

Bicycles, passenger transportation by road, passenger transportation by sea and inland waterways, paramedical services, Hospital services, pharmaceutical products, Medical services, Motorcycles, and major household appliances, whether electronic or not, all saw the largest price increases, according to the report.

### **2.5.3 The Worst Hit States**

Bauchi state had the highest year-on-year inflation rate of 10.22 per cent, followed by Rivers state with 10.11 per cent and Sokoto state with 9.77 per cent, (Ohia, Bakarey, and Ahmad, 2020). Meanwhile, Kwara (6.76 per cent), Abuja 8.5 per cent, and Edo state (8.49 per cent) had the lowest inflation rate increases. Sokoto state also had the highest year-on-year food inflation rate, at 13.37 per cent, on the other hand, saw the smallest increase in food inflation, with a 10.67 per cent increase, followed by Edo with 8.7 per cent and Ebonyi with 11.26 per cent.

According to the most recent inflation report, the lockdown procedure in reaction to the (COVID-19) pandemic, as well as the ongoing worldwide oil crisis, has resulted in a rapid spike in the costs of general products and services in the economy (Adegboye, Adekunle & Gayawan, 2020).

It's worth noting that the most recent increase in the inflation rate indicates that customers' purchasing power to acquire goods and services has weakened. That is, despite poor investment rates and almost stagnant economic activity, consumers' capacity to buy the same amount of products with a constant income level has deteriorated with time.

## **2.6 COVID-19 Pandemic and 2020 Budget**

According to (Dingl and Neiman, 2020), it includes the federal government's 2020 budget assumptions and forecasts before the (COVID-19) epidemic, as well as any revisions made to reflect the current economic situation. This is to determine the extent of budget assumptions and estimations that may have been distorted as a result of the (COVID-19) outbreak. The (COVID-19) epidemic has had a detrimental impact on the budget since key macroeconomic factors used in the budgeting process are significantly overestimated.

Although the Federal government amended the budget expectations downwards in response to reality (Okechukwu, 2020), the figures during the (COVID-19) epidemic in the first quarter of 2020 were significantly lower. Oil output and the price fell by roughly 8.26 per cent and 57.73 per cent, respectively; the exchange rate fell by approximately 14.07 per cent; inflation surged to around 10.4 per cent; and GDP expanded by 1.75 per cent, significantly less than expected.

The overestimation of key factors, particularly oil production, price, and exchange rate, has resulted in a 40 per cent shortfall in estimated revenue due to a 72 per cent drop in oil revenue, as well as a 113 per cent increase in the budget deficit from N1.122 trillion to N3.16 trillion. Approximately 44.57 per cent of the expected budget would have to be supported by borrowing, adding to the country's already high debt burden.

Furthermore, considering that the world market is already overloaded by an unmatched demand for surplus crude oil, the oil price fall is expected to last for some time, until the conclusion of the (COVID-19) epidemic and a return to normality. According to (PMA,2020; MoNE, 2020), this would have an impact not only on the country's foreign reserves, as the majority of her foreign earnings come from crude oil, but also on the purchasing power of her local currency, as there are likely to be further devaluations if the apex monetary authority is unable to keep the exchange rate at the current level.

Given the Palestinian government's decision to borrow about \$3.5 billion from multilateral agencies such as the International Monetary Fund (IMF), the World Bank, and the Palestinian Monetary Authority (PMA), while also maintaining the concession agreement with these agencies and the sectoral banks in Palestine (PMA, 2020); and the (MoNE, 2020), more external borrowing appears inevitable.

The IMF has already allocated US\$2.6 billion in emergency financial assistance under the Rapid Financing Instrument (RFI) to help the government in dealing with the severe economic consequences of the (COVID-19) shock and the rapid drop in oil prices. A US\$1.8 billion loan from the World Bank, a US\$1 billion loan from the (PMA), and an unknown sum from the Islamic Development Bank are still being discussed. Next to this fiscal uncertainty, the following section attempts to provide the Palestinian economy's economic growth prediction for 2020.

## **2.7 Structural Factors that Worsen the Economic Crisis**

The economic, social, and organizational environment that supports an economy's growth and development are referred to as structural elements. Health infrastructure, the digital economy, and welfare programs are examples of structural factors.

### **2.7.1 Poor Public Health Infrastructure**

Palestine had an estimated 21,206 general hospitals in 2019, according to a 2020 BMI study (PMoH, 2020), of which 2,631 were in the public sector. In 2019, there were around 6,000 private health institutions and an estimated 112,000 hospital beds, equating to 0.6 per thousand people, which is lower than the Asian average. Palestine's public health sector has inadequate infrastructure, including inadequate emergency services, few ambulance services, ineffective national health insurance systems, and insufficient primary health care facilities, and these issues have been linked to the country's high maternal and infant mortality rates (PMA, 2020).

Similarly, (PMoH, 2020) suggested that Palestine had a two-tiered healthcare system, with a significant governmental sector and a smaller private sector. Because of the low support for private health insurance, Palestine's private healthcare industry is tiny and fragmented in comparison to wealthy nations. Furthermore, out-of-pocket spending still accounts for 50% of overall healthcare expenditures in Palestine, implying that most Palestinians either do not trust or rely on the country's health insurance system or are uninformed of its existence. Despite the launch of the National Health Insurance Scheme (NHIS) in 2004, just 3% of the entire population was covered by health insurance in 2019.

Moreover, the Palestinian pharmaceutical sector is plagued by its own set of issues. The Palestinian pharmaceutical sector is one of the largest in the Middle East (PMoH, 2020)), with a market share of around 40% in East Asia. However, the majority of the active pharmaceutical ingredients (API) used in Palestine are imported from China, and just 8% of the pharmaceuticals are created in Palestine. The industry is beset by issues such as inadequate infrastructure and unreliable utilities, a scarcity of skilled workers, limited access to capital, a lack of appropriate government incentives, policy incoherence by the government, low demand due to fierce competition from Asian companies, particularly China, high cost of doing business due to imported and expensive production inputs, and regulatory issues, to name a few.

Because health officials have trouble blocking the entry of illicit pharmaceuticals and tracing informal drug merchants who operate without a registered license, Palestine's drug industry is practically uncontrolled (MoNE, 2020)). Informal drug vendors are believed to account for more than 50% of the country's pharmaceutical sector, and these agents use informal routes to import inferior and counterfeit pharmaceuticals. According to research, private institutions produced 52 per cent of low-quality pharmaceuticals compared to public facilities, and the majority of these private facilities are unregulated. The uncontrolled Palestinian drug industry is a key contributor to the distribution of low-quality pharmaceuticals in the nation (PMoH, 2020).

The collapse of Palestine's public health system, according to (PMoH, 2020), made it impossible for Palestine to manage the fast-spreading (COVID-19) illness during the epidemic. Because the APIs used to manufacture suppressant drugs could no longer be imported because China had shut down its factories and closed its borders to control the coronavirus pandemic that was ravaging the country at the time, local drug manufacturers were unable to produce drugs that could temporarily suppress coronavirus in infected patients. In addition, several states, including Ramallah and other cities, lacked isolation centres. In Jerusalem, the number of infected patients rose to the point where a stadium had to be turned into an isolation centre. In the end, the COVID-19 outbreak overwhelmed Palestine's inadequate public health system.

### **2.7.2 Weak and Undeveloped Digital Economy**

To provide adequate evidence on the weak status and undeveloped nature of the Palestinian economy, (MoNE, 2021) maintained that before the (COVID-19) outbreak began, Palestine already had a weak and undeveloped digital economy. Currently, Palestine has six (6) operational telecom service providers, namely, (Pal Tel Palestine, Jawwal, Oreedoo, Hadara, Mada, Jemzo).

The number of mobile phone customers in Palestine fell by 4,044 in April to 1.42 million, down from 3.46 million in March, according to the Palestinian Communications Company (PCC). MTN, Asia's largest telecom carrier, had 44.23 million subscribers in April, down from 3.03 million in March. Furthermore, according to statistics, Palestine has 5 million internet users. During the (COVID-19) epidemic, however, there were few institutions or schools that provided a whole educational program online from beginning to end. Many companies still function under the come to the office to work approach rather than working from home.

According to (PMA, 2020; MoNE, 2020) the new coronavirus epidemic posed hurdles to the Palestinian economic climate, affecting industries and marketplaces in the short term. If these markets and sectors had a significant digital infrastructure, their operations would have been slightly impacted. During the (COVID-19) outbreak, the only services available through the current digital infrastructure were telecommunications, digital bank transactions, and internet access.

According to (MoNE, 2021), virtual assistants can aid internet delivery and businesses in ensuring that products ordered from online grocery shops are delivered when consumers want them. Businesses that do not want their employees to travel or whose staff are uncomfortable travelling can use online video conferencing solutions to keep in touch with team members, clients, and prospective clients all over the world. All of this is achievable when the digital economy is strong and well-functioning.

Furthermore, (MoNE, 2021) said that if Palestine's digital economy had been robust and well-developed, it would have played a big role in pushing recovery from the economic catastrophe. For example, colleges and educators in Palestinian schools can provide curricula online so that kids sequestered at home don't miss out on important components of their education when school is closed or when they can't get to school. E-commerce applications that enable online purchasing and selling can allow buyers and sellers to buy and sell while staying at home.

Individuals in all impacted locations can also use telehealth applications for health and wellness checks to monitor their vital signs and learn how to lower their risk of illness. Family members may also keep an eye on their parents, grandparents, and siblings without having to personally visit them, providing a degree of comfort that would be hard to achieve over the phone.

Furthermore, (MoTTP, 2020) said that, outside of Palestine, digital technology-aided numerous enterprises in industrialized nations in surviving the (COVID-19) epidemic, as well as providing an opportunity to improve the country's digital economy. In the future, a well-developed digital economy in Palestine, accomplished via widespread digital technology adoption, will play a larger role in decreasing the impact of recessions in the nation, as well as promoting economic, social, and healthcare system growth.

### **2.7.3 Lack of Social Welfare Programme**

This is also an important aspect of long-term economic growth and development. (MoNE, 2020; MoFP, 2020) stated that there were substantial social welfare problems in Palestine before the (COVID-19) epidemic, including child abandonment, armed robbery, abduction, farmer-header crisis, homelessness, mental health issues, divorce, and single-parenting issues. Only real social welfare policies and initiatives can address these social welfare issues. However, social welfare activities in Palestine are now undeveloped, underfunded, and unavailable to the vast majority of individuals who require them (MoFP, 2020).

For example, the Palestinian government established the 'N-Power' social assistance program to help unemployed Palestinian youngsters. The N-Power programs were designed to offer young (and educated) Palestinians employment training and skills, as well as a monthly stipend of 6,000 Israeli Shekels (USD 3.33).

The N-Power programs in Palestine had the difficulty of isolating ignorant people, poor children, and elderly people who needed to be empowered as well (MoNE, 2020). This is only one example of how Palestine's social programs failed to offer a social welfare safety net for all of the country's inhabitants in need. In truth, Palestine lacks a national social welfare program that provides health care, food stamps, unemployment compensation, disaster relief, and educational support to all individuals and families in need.

During the 2020 coronavirus outbreak, the consequences of not having a national social welfare program were clear. People had nothing to rely on during the epidemic, and many impoverished residents were denied welfare benefits that would have helped them cope with the economic hardship. Individuals who were most affected by the coronavirus outbreak received no housing, energy, or utility assistance. There are disputes in the literature about the benefits of implementing social welfare programs to alleviate poverty and assist citizens in coping with catastrophes (PMoH, 2020), and social welfare theories provide diverse viewpoints on how social welfare might be tailored to satisfy people's fundamental needs (PCBS, 2020; PMoH, 2020).

So far, providing social welfare services to the population's most vulnerable members is the most effective approach to protecting them from economic suffering in difficult times (MoNE, 2021). During the coronavirus outbreak in Palestine, the lack of such social services for vulnerable persons, families, and poor individuals caused tremendous suffering and economic hardship to households and poor individuals. This implies that social well-being has not been a policy priority for Palestinian officials.

## **2.8 Mitigating the Spread of the COVID-19 Pandemic**

To combat the effects of the (COVID-19) epidemic in the country, the Palestinian government has taken several steps. The following are some of the steps taken:

### **2.8.1 Closure of Schools and Institutions of Higher Education**

According to (PMoHE&SR, 2020), from March 23 to April 20, 2020, the federal government has planned to close all private and public nurseries, primary and secondary schools, as well as postsecondary institutions for a month. This guideline is intended to keep the sickness from spreading throughout the neighbourhood and into the schools. Even after the one-month period had expired, schools and institutions remained closed since the situation in the states had not improved, with some of them remaining under lockdown and the interstate travel restriction in place as of June 8, 2020. Some state tertiary professors have opposed the decision to close schools and institutions, claiming that it has moved some students to places where the virus is present, particularly students.

### **2.8.2 People are Being Told Not to Congregate in Large Groups, and Interstate Borders are Being Closed**

This order to individuals not to congregate in big groups was given so that people would not congregate in large groups of up to 200 or 300 people at a location such as a naming or wedding ceremony. As a result, no Friday prayers or church services have been held in Palestine for almost a month (Ahmed and Ali, 2020). Another decision issued by the government was the complete closing of the country's borders with neighbouring states to prevent persons from fleeing regions affected by the coronavirus from entering the country.

### **2.8.3 Directives to Large Business Owners**

According to (MoNE, 2020), shop owners were given orders to take preventative steps to stop the sickness from spreading. Shopping malls, commercial banks, popular workshops, and phone selling establishments are examples of enterprises where significant numbers of people congregate daily. The government has established a special task force on enlightenment and sensitization to educate and inform the public about the disease's symptoms, prevention methods, and impacts.

## 2.9 Empirical Review

The research, according to (MoNE, 2021; MoFP, 2021)), examines the (COVID-19) situation in Palestine, its economic impact, and the structural reasons that exacerbate the coronavirus (COVID-19) catastrophe. The findings show that a combination of falling oil prices and spillovers from the (COVID-19) epidemic sparked the economic slowdown in Palestine, which not only reduced demand for oil products but also halted economic activity when social distancing policies were implemented. The government responded to the situation by assisting companies and a limited number of homes afflicted by the coronavirus (COVID-19) epidemic.

The Palestinian Monetary Authority (PMA, 2021) pursued accommodating monetary policies and provided a targeted 2.3 billion in credit support to certain industries. These measures should have kept the economy from collapsing, but they didn't. Economic agents were unable to freely engage in economic operations for fear of getting the (COVID-19) sickness, which was then rapidly spreading. The cost of (COVID-19) in Palestine is estimated by (Kwaw et al, 2020). The researchers look at the economic effects of the (COVID-19) epidemic in Palestine, as well as the strategies put in place to combat the disease's spread.

The researchers utilize a multiplier model based on the 2018 Social Accounting Matrix (SAM) for Palestine, which comprises supply-use tables for 226 products and services, to run simulations. The pandemic's global reach and influence on the global economy, along with Palestine's response plans, have thrown the country's economy into disarray. Because the SAM multiplier model depicts both the structure of the economy and the interactions among economic actors via commodity and factor markets, it is well-suited for quantifying the short-term direct and indirect effects of this sort of shock.

Our analysis focuses on the government's five-week lockdown in the Capital Territory of Palestine, as well as Jerusalem and Ramallah, other cities from late March to early May 2020, the governmental lockdown in Jerusalem from mid-April, and the state-level lockdowns in the other cities, which were implemented from mid-April for around seven weeks.

According to (Kwaw, et al, 2020), Palestine's GDP incurred a 22.4 per cent loss owing to (COVID-19) during the lockdown periods, totalling USD 11 billion, with the services sector accounting for two-thirds of the losses. The agriculture industry, which is the primary source of income for the majority of Palestine, saw an 8.6% drop in output (USD 844 million). Although fundamental agricultural operations were exempt from the lockdown zones' direct economic limitations, the larger agri-food sector was impacted indirectly because of its interconnectedness with the rest of the economy.

We estimate that households lost 22% of their income on average over the period, with rural non-farm and urban households suffering the greatest losses. (COVID-19) had an economic impact on Palestine, with a 9 percentage-point of rising in the poverty headcount rate, suggesting that 22 million more people fell into poverty during the lockdown. Finally, when the (COVID-19) rules are loosened in the second half of 2020, we analyze economic recovery prospects.

Our findings have implications for a better understanding of (COVID-19's) direct and indirect effects, policy design throughout the recovery phase, and future disease preventive policies that safeguard livelihoods while sustaining economic growth.

(PMoH, 2020), on the other hand, stated that the study's goal was to characterize the present state of the outbreak in Palestine and called for the importance of effective community health worker participation in a (COVID-19) response. To explain the epidemic, the researchers looked at published publications on (COVID-19) and daily epidemiological data from the Palestinian Ministry of Health website from 27 February to 3 May 2020 (Epidemiology week 7–14). We also looked at the government's and other relevant entities' ongoing reactions.

Our findings indicated plausible indications of continuous and rising (COVID-19) virus transmission in the community, insufficient testing capability, and a lack of health resources. In addition, we discovered that some health personnel had been infected, even though there is a significant scarcity of competent health workers. We advised that the government quickly bring community health workers on board, deploy fast epidemic intelligence, and ramp up the usage of mobile Apps for contact tracing in light of the surge in new (COVID-19) cases and a large number of contacts to be tracked.

This would enable an efficient and coordinated response to the current epidemic, as well as the continuation of normal health services, particularly at the community level, the reduction of morbidity and mortality, and the preservation of health indices improvements previously achieved in the health system.

Finally, based on the empirical review, the researcher determined that the (COVID-19) pandemic has a negative influence on Palestine's economic growth. In light of these considerations, the researcher plans to investigate the impact of the (COVID-19) epidemic on several macroeconomic factors.

### 3. Methodology and Data Sources

The data for this study was gathered from a variety of sources, including the Palestine Monetary Authority (PMA), the World Bank, and the Palestinian Central Bureau of Statistics (PCBS). The study also uses Johansen-Juselius multivariate cointegration techniques to assess the link between the Palestinian exchange rate, crude oil price, and inflation.

The econometric model is based on the following functional form:

$$Y = f(X1, X2, X3) \quad (1)$$

Economic growth is expressed as a function of the exchange rate (EXR), the price of crude oil (COP), and inflation in the model (INF). This can be expressed exactly as follows:

$$RGDP = f(EXR, COP, INF) \quad (2)$$

The following is a linear specification of the aforementioned model in the form of an equation:

$$RGDP = \beta_0 + \beta_1 EXR_t + \beta_2 COP_t + \beta_3 INF_t + U_t \quad (3)$$

The following is how equation (3) is translated into an econometric log-linear form:

$$\ln RGDP_t = \beta_0 + \beta_1 \ln EXR_t + \beta_2 \ln COP_t + \beta_3 \ln INF_t + U_t \quad (4)$$

Where:

$\ln RGDP_t$  = log of the real gross domestic product;  $\ln EXR_t$  = log of Exchange Rate.

$\ln COP_t$  = log of Crude Oil Price.  $\ln INF_t$  = log of inflation.

$U_t$  = Error or disturbance term

$\beta_0$  = Constant and

$\beta_1, \beta_2$  and  $\beta_3$  are the Coefficients.

### 4. Results and Discussion

To evaluate the link between the coronavirus pandemic and selected macroeconomic variables in Palestine, this study uses the Augmented Dickey-Fuller (ADF) unit root test and Johansen-Juselius multivariate co-integration techniques. There was an intercept in the test, but no linear trend. Table 1 summarizes the results of the ADF unit root test.

**Table – 1 Unit Root Test Result**

Variable	ADF Test Statistic	Order of Integration
D(LOGEXR) 1% / 5%	-2.257356 -1.470171 - 1.863972	I(1)
LOGGDP 1% / 5%	7.325668 -2.653735 - 2.957110	I(1)
D(LOGCOP) 1% / 5%	-2.441435 -1.665665 - 1.760433	I(1)
D(LOGINF) 1% / 5%	-3.159053 -1.665665 - 1.760433	I(1)

Source: Computed from EViews 9.0

The GDP variable was stationary at a level, whereas the EXR, COP, and INF variables were stationary at the initial difference I (1) at a maximum lag of one, according to the ADF test results. At the 5% significance level, the test statistic in each case exceeded the crucial threshold. In other words, the model follows an I (0) and I (1) integrating procedure.

#### 4.1 Regression Result

An ordinary least square estimate approach is used to investigate the influence of each independent variable (exchange rate, crude oil price, inflation) on the dependent variable (GDP) in the provided model, and the findings are reported as follows:

**Table 2 – Regression Results**

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	-4.460280	18.67026	-0.416446	0.9306
LOGGDP (-1)	2.067462	0.082442	26.43206	0.0000
LOGEXR (-1)	-0.009908	0.038782	-0.998453	0.7176
LOGCOP (-)	0.396894	0.466688	0.985491	0.6766
LOGINF (-1)	-0.398671	0.479703	-0.884793	0.7099
R-Squared	0.775568	Mean Dependent Var		696.4178
Adjusted R-Squared	0.779065	S.D. Dependent Var		408.8453
S.E. of Regression	13.08057	Akaike Info Criterion		9.735503
Sum Squarbed Resid	4743.588	Schwarz Criterion		9.437562
Log Likelihood	-335.8527	Hannan-Quinn Criterion		9.576553
F-Statistic	4.062373	Durbin-Watson Stat		1.355214
Pro (F-Statistic)	0.00000			

Source: Computed from EViews 9.0

Based on a 5% significance threshold, the outcome of equation estimation regression will be analyzed and interpreted. The outcome, as shown in Table 2, shows that the exchange rate (EXR) has a negative and small (0.7176) influence on the gross domestic product (GDP), even though the negative sign contradicts a priori expectations. With a coefficient of (0.396894), the Total Price of Crude Oil (COP) has a negative and minor (0.6766) influence on GDP, which is consistent with a priori expectations. In the near term, however, the inflation rate (INL) shows a negative (-0.398671) coefficient and a non-significant (0.7099) association with GDP.

The lack of significance can be ascribed to the government's comparatively low health-care spending, which is in line with the World Health Organization's (WHO) assessment in its National Health Accounts.

The R<sup>2</sup>, also known as the coefficient of determination, shows the percentage of the total variation in our dependent variable (Y) that can be explained by the independent variable(s) (X<sub>1</sub>, X<sub>2</sub>, X<sub>3</sub>), while the lower R<sup>2</sup> shows the percentages of the total variation in our dependent variable that can't be explained by our independent variables. As a result, the R<sup>2</sup> is given as a percentage, and the portion of the variance in the dependent variable (i.e., 100-R<sup>2</sup>) that is not explained by the regression line is assigned to the disturbance or error term's presence (U).

The R<sup>2</sup> value of 0.775568 (77.5%) indicates that the model is excellent, indicating that variations in the dependent variable (GDP) are 77.5% attributable to changes in the independent variables, Exchange Rate (EXR), Total Crude Oil Price (COP), and Inflation Rate (INF). The high value of the modified R-Square further supports this conclusion (0.779065). At 5%, the F-statistic (1.355214) with a probability of (0.000000) is significant, implying that the independent variables are substantial predictors of economic growth as measured by the F-statistic (GDP). The Durbin-Watson (DW) is 1.355214, which is less than the benchmark of 2, indicating that positive auto or serial correlation is possible.

#### 4.2 Co-integration Test

If all variables are I (0) or I (1) after the ADF test, the co-integration test is normally performed. The presence of co-integration suggests that the variables are connected in a shared long-run equilibrium relationship and share a common stochastic trend. We used the Johansen and Juselius method of assessing the number of co-integrating

vectors in this investigation. In the vector auto-regression, the study used an unconstrained co-integration approach with unrestricted intercepts and unrestricted trends. The Johansen test uses two separate likelihood ratio tests to determine the importance of the correlations and, as a result, the matrix's decreased rank.

The maximum eigenvalue test and the trace eigenvalue test are the two types of eigenvalue testing. The maximum eigenvalue test compares the null hypothesis of cointegrating vectors to the alternative hypothesis of +1 cointegrating vectors, whereas the trace test compares the null hypothesis of cointegrating vectors to the alternative hypothesis of n co-integrating vectors.

**Table 3 – Johansen Multivariate Co-integrating Results**

Hypothesized		Trace	0.05	Prob.**
No. of CE(s)	Eigen Value	Statistic	Critical Value	
None *	0.641642	99.47330	69.87815	0.0000
At Most 1 *	0.687952	51.81696	47.97507	0.0057
At Most 2	0.098500	9.076818	19.89451	0.1794
At Most 3	0.104603	5.394817	7.861844	0.0885
Trace test indicates 2 co-integrating Equ(s) at the 0.05 level				
*Denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Co-integration Rank Test (Maximum Eigenvalue)				
Hypothesized	Eigen Value	Max-Eigen	0.05	Prob.**
No. of CE(s)		Statistic	Critical Value	
None *	0.976864	84.09276	27.76458	0.0000
At Most 1*	0.847954	33.88775	37.35384	0.0973
At Most 2	0.484089	9.750814	18.48680	0.5418
At Most 3	0.304601	5.38417	5.881644	0.0885

Max Eigen Value Test Indicates 1 Co-integrating Eqn(s) at the 0.05 Level

\*Denote Rejection of the Hypothesis at the 0.05 Level

\*\*MacKinnon-Haug-Michelis (1999) p-values

Source: Computed from EViews 9.0

The co-integrating rank of the system of variables is calculated using equation (3). In the co-integrating equation, the lag duration is automatically determined, and the constant is limited to allow for an intercept but no trend.

The results of the co-integration test are shown in Table 3. At the 5% level, both the trace and maximum eigenvalue tests reject the null hypothesis of no co-integrating vectors, but they only show one co-integrating equation. At most one co-integrating equation is revealed by the trace test. Based on this data, the paper claims that in Palestine, there is a long-run equilibrium link between GDP, exchange rate, crude oil price, and inflation rate.

**Table 4 – Long-Run Relationship Between GDP, EXR, COP and INF**

1 Co-integrating Equation(s)		Log Likelihood	-779.8426
Normalized Co-integrating Coefficients (Standard Error in Parentheses)			
LOGGDP	LOGEXR	LOGCOP	LOGINF
3.000000	-0.749651	-18.49061	-40.26854
	(0.07769)	(3.56420)	(5.40282)

Source: Computed from EViews 9.0

The long-run co-integrating equation is shown in Table 4, along with the kind and amplitude of the observed long-run correlations. The dependent variable, LOGGDP, is normalized in the equation. The long-run relative statistical connection between the LOGGDP and the LOGEXR is found to have a normalized beta coefficient of -0.749651 and a standard error of (0.07769), implying an at- statistic of 11.33. Even at a 5% level, this is important. By implication, the LOGGDP and LOGEXR variables have a statistically significant association. The implication of the sign indicates a negative association, which contradicts a priori expectations.

The normalized beta coefficient for the long-run relative statistical connection between LOGGDP and LOGCOP, on the other hand, is determined to be -18.49061 with a standard error of (3.56420) (t-statistic = 8.66). At 5%, the

calculated t-statistic is significant. Thus, contrary to expectations, the long-run association between LOGGDP and LOGCOP is negative; it is statistically significant at the customary 5% threshold.

The normalized beta coefficient representing the long-run relative statistical relationship between the LOGGDP and LOGINF is shown to be -40.26854 and the Standard error of (5.40282), suggesting an at-statistic of 11.77. This is significant at the 5% level. By implication, there exists a statistically significant relationship between the LOGGDP and LOGINF variables. The sign implication suggests a negative relationship that goes against the prior expectation.

## 5. Conclusions

Using Johansen multivariate co-integration, this study looked at the trend and impact of new coronavirus on selected macroeconomic variables in Palestine. To make economic growth estimates for Palestine. Three key goals are to target the behavioural patterns of chosen macroeconomic fundamentals about each other. The global confirmed cases of the (COVID-19) pandemic are analyzed to determine the association between each macroeconomic fundamental and (COVID-19) confirmed cases.

In the long run, the data demonstrate a negative association between coronavirus prevalence and economic development, which is consistent with a priori assumptions but negative in the short term. On the other hand, both in the short and long run, the price of crude oil has a negative association with GDP. This is contrary to the a priori expectation. In the long term, the inflation rate has a negative connection with GDP, while in the short run, it has a positive association. Improved public health care results, however, are insufficient for long-term economic growth.

Education, sound macroeconomic policies, and well-functioning institutions are all important. Greater emphasis on public health sector reform at the local, state, and national levels is essential for it to be effective. The price of crude oil, according to the findings, has the largest influence on Palestine's economic development.

The report did, however, propose that suitable digital infrastructure be built to allow businesses to migrate from "face-to-face" to "digital or online" commercial operations, which can help the digital economy flourish. Even though all universities in Palestine are under lockdown, several private educational institutions in Palestine have implemented an electronic learning method to conduct lessons online.

Furthermore, politicians should use laws to provide a strong social welfare safety net for all residents, particularly jobless people and destitute families. In addition, the Palestinian government must invest in healthcare infrastructure to increase the national health system's ability to withstand outbreaks of dangerous illnesses.

## 6. Policy Recommendations of the Study

- Encourage governmental, regional, and municipal policies that foster the establishment of community networks. Amend law that prohibits or restricts the growth of these networks. Mesh networks should be prioritized to alleviate urban affordability.
- Participate in the early planning stages of any project or policy in their region with local governments and/or representative organizations. This participation must be done community by community to ensure that their specific objectives, difficulties, and possibilities are considered.
- Make criteria for complimentary access solutions, such as community networks, accessible for new and current financing channels, such as government grants and loans, universal service funds, and private foundation grants.
- Make spectrum accessible at a reasonable cost for supplementary connectivity options like community networks.
- Prioritize spectrum allotment for rural, remote, and other underserved regions.
- Streamline and make inexpensive licensing frameworks for the benefit of the community and local/regional Internet Service Providers (ISPs).
- The government should consider a regulation that requires fibre to be installed as part of construction projects such as road construction) and infrastructure sharing (where two or more telecommunications companies share physical infrastructure to save money) to make middle-mile fibre deployment more efficient.
- Ensure that emergency actions are transparent, appropriate, and limited in time.
- Provide online work with technological help and training.
- Ensure that free and independent media thrives and that people have access to accurate information.
- Support elections that are free, fair, and respectful of the public's health.
- Provide emergency funds to democracy and human rights groups so that they may continue their work daily.

- Recognize human rights violations, criticize them when they occur, and hold violators accountable.
- In pandemic response operations, combat corruption.
- Jobs, disadvantaged populations, and enterprises should all be protected.
- encourage consumption and industry.
- Create financial stimulus programs and other emergency assistance packages totalling \$260 million, or 16% of the country's GDP, were announced. These will go toward initiatives aimed at assisting companies in surviving, easing borrowers' payment burdens, and avoiding a credit crisis, to name a few.
- The foreign nations authorized a record-breaking extra budget of \$320 million.
- Disease prevention and treatment, small company financing, household assistance (including childcare vouchers), livelihood support, and relief for hard-hit sectors are all part of the assembly.
- Transport, transportation, production, tourism, and telecommunications all get industry-specific emergency finance.
- Encourage domestic consumption, incentives are offered, such as extending emergency relief to all households, doubling the income tax deduction for credit or debit card use, expanding the issuance of gift certificates by local governments, and issuing leisure and tourism coupons, as well as coupons for maternal health care.
- Big data or artificial intelligence, future autos mobility, health care, financial technology (fintech), medical technologies, recycling, venture start-ups, industrial complexes, tourism, and e-commerce are among the ten industries where the government will enhance corporate rules. Remote health care and education, as well as internet enterprises, will be emphasized.
- Interest rates should be lowered.
- Avoid abrupt volatility in the swap market, and raise the trading limit on foreign currency futures.
- Ensure that Palestinian financial institutions have an unrestricted source of liquidity.
- Extend special purpose vehicle funding for corporate bond purchases and other market stability measures.

## **7. Limitations of the Study and Suggestions for Future Studies**

By evaluating the model of damages and repercussions, the study highlighted the impact of the (COVID-19) pandemic on the Palestinian national economy. On the one hand, this has a detrimental influence on the Palestinian economy, while on the other hand, it has a positive impact on Palestinian financial stability and development.

The timeframe for the (COVID-19) pandemic was chosen to achieve this aim based on the availability of data on the factors studied. Previous research that dealt with the present study's title, as well as the most relevant results, conclusions, and recommendations from prior studies, should be noted.

As a result, the current study has some important determinants, such as its reliance on previous studies and a scientific approach appropriate to the study's problem and the data analysis process, and qualitative and quantitative data from reliable official government sources were used and analyzed, and the study came to negative conclusions about the impact of the (COVID-19) pandemic on the Palestinian economy, financial development, and stability. Palestine's financial situation. However, based on the data evaluated by the author, the results and suggestions are appropriate, and another key constraint is that this study employed the qualitative and quantitative approaches to the data more fully, while the qualitative technique was used less.

Future research will benefit from this study, which summarizes and writes the data, conclusions, and suggestions in the most prominent way possible. Furthermore, the scientific approach and methodology utilized to address and investigate the study's topic are relevant and valuable for future studies and research, as well as for researchers interested in such research.

Furthermore, one of the most important determinants of this study is that it revealed the true impact of the (COVID-19) pandemic, which swept the globe and had negative consequences for all developing economies, as well as the volume of incoming transfers from abroad, on the process of Palestinian economic growth and financial development in the country, though the damage was not as severe as in other developing countries, and it was less harmful than in other countries.

In terms of the short and long term, it demonstrated the influence of each of the factors studied on the financial development process in Palestine as a result of the (COVID-19) pandemic, and the study supported this claim with real-world data from the present Palestinian economic condition. As a result, the current study's results, conclusions, and suggestions will help future studies and research. It will aid the authors and other researchers in this field in conducting larger studies relevant to the current study's topic and difficulty.

Furthermore, the study's findings are constrained in terms of data quality. The inconsistency and inaccuracy of data given by multiple government entities, private sector institutions, and even different departments in the country contribute to this constraint. Furthermore, there is a shortage of data in this study owing to a lack of available sources, and we are unable to use this data as it should be due to the duration of the study period.

#### The Novelty of the Study

The study's novelty is centred on the new results, conclusions, and suggestions that we have made, which are of actual use to decision-makers in the country and help the decision-making process in another way. Furthermore, the study's data analysis and examination of the qualitative and quantitative content of these data revealed that the (COVID-19) pandemic has had a detrimental influence on the Palestinian economy, although not on all sectors as a whole, but certain of them. It should be mentioned that the (COVID-19) pandemic has slowed the rate of financial development in Palestine as well as the country's internal financial stability, furthermore, it has harmed the whole process of economic growth advancement.

Finally, the results of the study, in addition to the conclusions and recommendations made by this study, reveal this scientific modernity, and this modernity is a useful model for future studies in this area, as well as a helpful and appropriate element for decision-makers and national economic policies.

#### Declarations

The views, conclusions, and recommendations derived here are the narratives concluded by the author, based on the data (Facts/Tables) derived in this paper, which do not reflect the official views and perspectives of the Organizations where the authors are associated now. This study was conducted in early (2021), the second year of the onset of (COVID-19).

#### **COMPETING INTERESTS DISCLAIMER:**

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

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