A Comparison of Economic Impact in US: COVID-19 and Ukraine Conflict

Tianhao Chen*

University Hill Secondary, Vancouver, Canada

*Corresponding author: 2112836@learn.vsb.bc.ca

Abstract. This paper focuses on the comparison of the different economic impacts of the COVID-19 and Ukraine wars. The COVID-19 pandemic and the Russian-Ukraine war shaken the global economy and resulted in a record-breaking inflation rate in the United States that continued to increase until now. After a series of Stimulus bills and expansionary monetary policies, such as the CARES act and lowering interest rates, the United States GDP was able to recover from the direct effects of the pandemic. However, the labour force participation rate never returned to its previous level. After the Russian-Ukraine war broke out, the United States and its allies imposed a wide range of economic sanctions against Russia. The crude oil prices also surged in the first few days, making it a key contributor to the inflation. However, with the increase in interest rates, the US federal reserve was able to control the rise in inflation. This is corresponded by a surge in the S&P 500 stock index. Overall, the United States is far more affected by the COVID-19 pandemic than the Russian-Ukraine war by a wide range of comparisons.

Keywords: COVID-19; Inflation; Russian-Ukraine war; US economy.

1. Introduction

The COVID-19 recession and the Russian-Ukraine war has changed the world dramatically in many different ways. The COVID-19 pandemic has drastically limited the production efficiency of nearly all global economies and countries by restricting international trade and forcing lockdowns on many cosmopolitan cities around the world. The Russian-Ukraine war spurred up a sense of uncertainty throughout the entire global market. Western countries led by the US have imposed unilateral sanctions on Russia, causing many people, especially those in the EU and UK, to have a series of concerns over the overall economy.

This paper investigates and provides a unique insight into a rare collision of two subjects with weak correlations that have drastic effects on the global economy. This paper focuses on the United States, the largest economy, and the financial center of the world, to see how it will affect the decision of government and that of the federal bank. The topic of COVID-19 and the Russian-Ukraine war is extremely relevant to not only the daily lives of people but also to the widespread economic and financial influences. The future is also very dependent on the economic outcome of these two events. The data collected and summarized in the paper is an excellent source for future research related to the COVID-19 pandemic and the Russian-Ukraine war. Due to how recent the issue is, there are not many papers directly comparing and summarizing the economic outcomes of these two events. Additionally, this paper analyzes and compares a range of economic data and government actions from the aftermath of these two events. The range of economic data used in this paper includes the unemployment rate, stock market index (Standard and Poor's 500), labor force participation rate, oil market prices and inflationary rates. Government and central bank actions contained in this document include government subsidies during the COVID-19 pandemic, lowering and increasing interest rates from 2020 to 2022, and sanctions against Russia during the Russia-Ukraine war.

2. Economic Impact of COVID-19 Pandemic

The COVID-19 pandemic was a pandemic caused by the nova coronavirus. Ever since it first appeared in the general population, it has affected almost every single country in the world, and caused massive damage. Since the WHO declared the COVID-19 pandemic as a global health crisis in the March of 2020, it has accumulated over 600 million cases and over 6.5 million deaths [1].

To cope with the COVID-19 pandemic, many countries have implemented lockdowns and banned international travel, some even banned domestic travel. Many people found themselves to be trapped in their homes. Some people were lucky enough to have a job that allows them to work-from-home, whereas others are laid off. For those living and working at home, their children also had to learn online, which means that many parents, especially mothers, must manage work and childcare like never before. Those who are laid off are mostly the ones in the service industry, for example restaurant servers. The unemployment data directly shows in Figure 1. As can be seen from unemployment data from the U.S. Bureau of Labor Statistics via fred.stlouisfed.org, the unemployment rate reached an all-time high of 14.7 percent at the beginning of the COVID-19 pandemic. This is likely a result of lay-offs from the COVID-19 pandemic, people unable to reach work due to lockdowns, and people voluntarily leaving work due to safety concerns.

Fig. 1 Unemployment rate in US from 2019 to 2022 [2]

The COVID-19 pandemic not only resulted in an increase in the unemployment rate, but it is also accompanied by a decrease in the labor force participation rate. Since the beginning of the pandemic in February of 2020, the labor force participation rate in the United States dropped from a high of 63.4% to a low of 60.2% in April of 2020, as Figure 2 shows (source: U.S. Bureau of Labor Statistics). Later, the labor force participation rate recovered to around 62%, but still very much lower than the pre-pandemic levels. From these two employment-related data, it can be concluded that the U.S. job force has shrunk. If people no longer work, it can be safely assumed that their income would also decrease. When this occurs, people spend less and consume less. It is therefore no surprise that GDP has also fallen.

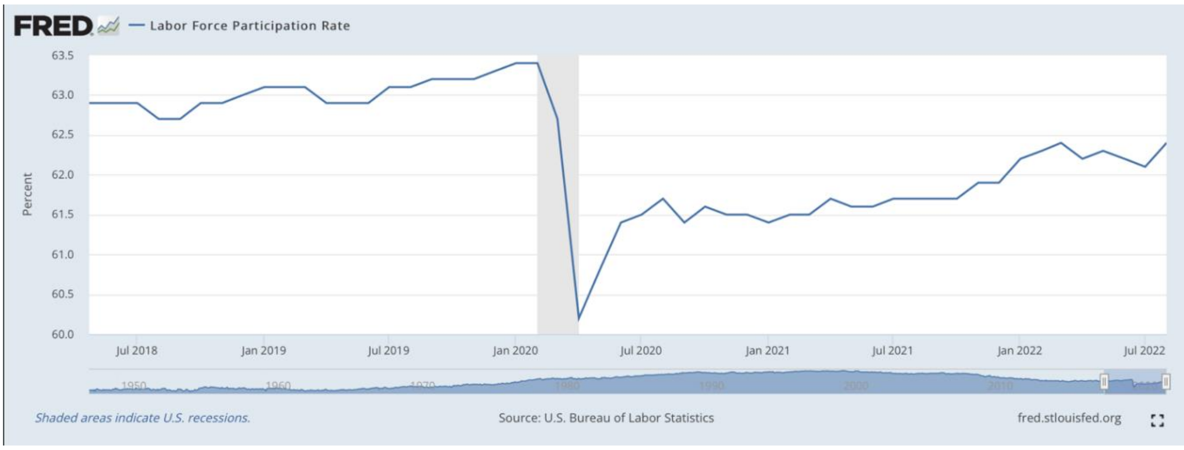

Fig. 2 Labor force participation rate in US from 2018 to 2022 [2]

As Figure 3 illustrates, the United States entered a short recession from at the start of Q1 2020, which is also when the pandemic just started and no one is prepared for it. The government had to deal with COVID-19 as a public health crisis first and then treat it as an economic crisis. The US government responded to this by issuing a series of stimulus packages throughout the years of 2020 and 2021 to ensure that the economy is still functioning. These include the CARES Act passed in March of 2020, the $2 trillion stimulus bill, and lowering the interest rate to just 0.25% to ensure that consumers have enough purchasing power [3].

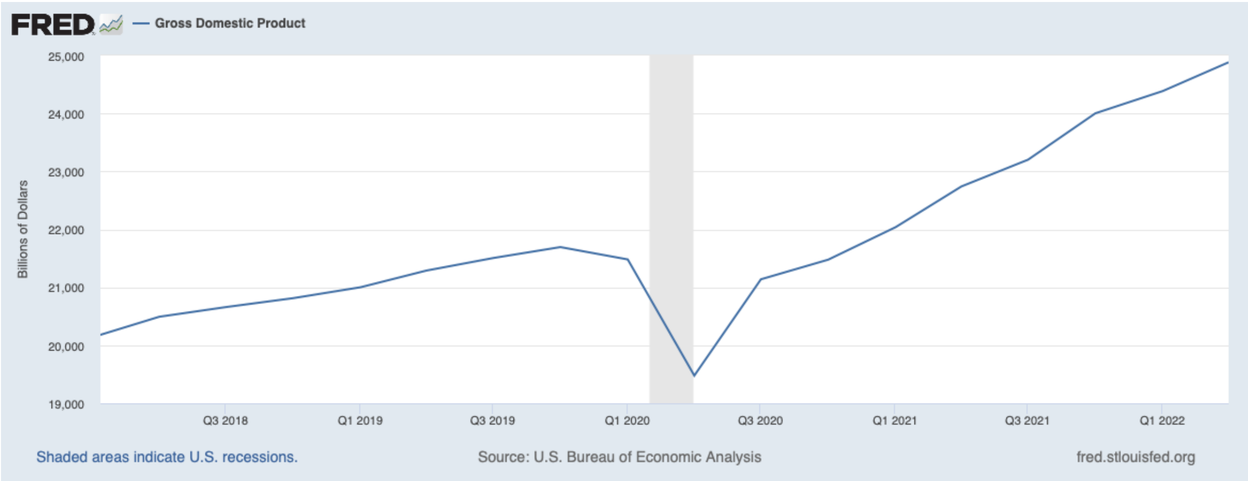

Fig. 3 GDP in US from 2018 to 2022 [2]

Many people say that this stimulus bill was effective. According to a range of economic data available, this is indeed the case. The recovery from the COVID-19 Pandemic Recession was one of the quickest in US history. These stimulus bills worked by allowing the consumers to retain their purchasing power in terms of consumer goods at least. Although the service industry took a hit, the stimulus bill prevented stores from laying off most of their employees when revenue fell below the profit margin [2]. After the CARES Act was issued, the unemployment rate began to drop almost immediately. The labor force participation rate began to increase, but still did not return to the pre-pandemic levels.

GDP, as a major indicator for economic health, was approaching pre-pandemic levels in the third quarter of 2020 and surpassing the pre-pandemic levels in the fourth quarter of 2020. These stimulus packages were able to provide some additional purchasing power to consumers, which, in addition to the boredom of the lockdown, the consumption of durable goods was massive during this period. With the number of covid cases still rising in the later months of 2020, most people still choose to stay at home, which has led to low consumption of service goods but high consumption of durable goods and consumer goods [2].

Another common effect of GDP is that although nobody cares too much about it when it is growing, when it begins to slow down or even decrease, everyone knows that something is wrong. It has a very large impact on consumer expectations, and this is best reflected in the stock markets. The S&P 500, as the major stock index in the US, was also suffering a hard drop when the pandemic began. It started to fall in an nearly linear fashion from the middle of February 2020 to the middle of March 2020 [4]. After the US government gave out the relief packages and the Federal bank lowered the interest rate to only 0.25% from the previous rate of 2.25% during March 2020, the stock was able to quickly rebound. The index generally followed the same trend as GDP and unemployment rate, although it did so at a slower pace. It was able to return to pre-pandemic levels in the middle of August 2020. Then, it was increasing at a steady rate until the end of 2021. Alongside the series of fiscal policies that the US government decided to implement, the most effective policies' regarding the stock market are probably the monetary policies.

When the US Federal Reserve decides to lower interest rates, it becomes much easier for everyone to borrow money; this includes individuals, businesses and investors. For individuals, a lower interest rate allows them to borrow more money. Many young adults have a tendency to spend their credit before they receive their monthly paychecks. One person's spending is another person's income, and this holds true. Credit is one important way of moving the economic system forward and making it easier to borrow money will help in terms of this. As for businesses, lower interest rates will be beneficial to them on two fronts. First, the lowering of interest for the individuals means that it will be most likely mean more revenue for businesses since more people will be buying their products. Second and the most importantly, by lowering the interest rate, it makes it easier for a business, or large, to borrow more money. Some professionals even say that it is this credit that allows the modern economy to change out of a zero-sum game [5]. These types of investments include those with short and long-term investments in things like better equipment and larger warehouses. It may also allow more funding for scientific research and innovation. Credit is what moves the market forward.

As for an individual investor and the stock market, the effect of lowering interest rates on individual consumer and business adds up together. When the consumer buys more goods and services, the business will likely earn more profit. When this happens, the company's shares and holdings will be worth more, and their financial statements will look even better. All of this attracts more people to buy in to their stocks. Higher stock demand will also likely drive up stock prices, making the S&P 500 and Dow Jones stock market indexes look even better. As the stock market is growing, the marginal propensity to spend will also be likely to get even bigger as more and more people feel wealthier. This will then go on to have the same effect as what happened when people are more willing to spend.

To analyze the effect of this on a macroeconomic scale, the benefit from increasing interest rates on the general market is even clearer. When the Federal Bank lowers the interest rates, the money supply increases. As mentioned before, the more money people have, the more likely they are going to spend it. Thus, the total aggregate demand also increases. It is possible that this kind of increase in aggregate demand can close the recessionary gap created by the pandemic, but at the cost of a rising price level. The result is that the economy will be closer to Long Run Aggregate Supply or full employment, but at the price of an increase in inflation.

The U.S. economy has recovered from the economic impact of the COVID-19 pandemic, but there is certainly a left-over effect of this economic event, either as a direct result of the pandemic or as a result of a series of fiscal and monetary policies. A direct consequence of the pandemic is that labor market participation, even as late as September 2022, has still not recovered to pre-pandemic levels. A series of expansionary fiscal and monetary policies has left the seeds of a massive inflation bloom in the years 2021 and 2022, when the US economy was facing a drastic increase in inflation. However, there were many other variables that are causing the 2022 record breaking inflation, such as the Russian-Ukraine war.

3. Economic Impact of Ukraine Conflict

The war in Ukraine formerly started in the February of 2022. On February 21, Russian President Vladimir Putin recognized Ukraine's separatist areas in the east and called them Donetsk People's Republic (DNR) and Luhansk People's Republic (LNR). However, most western countries recognize these areas as Russian-backed separatists. An increasing number of troops have been massed on the borders of these states. UK and EU imposed its first round of sanctions against Russia on February 22; the UK sanctioned several Russian oligarchs and Russian banks, and the EU sanctioned all Russian lawmakers who supported the independence referendum, as well as multiple banks in the separatist areas.[6]. On February 24th, Russian troops formerly entered Ukraine lands. Numerous towns and military installations were targeted, including the Chernobyl power plant, the Ukrainian capital of Kyiv, and Nova Kakhovka, where the North Crimean Channel begins. The US also released a new round of sanctions on this day, including measures as described below [7].

(1) Severing the connection between Russia’s largest bank, Sberbank, and the US financial system,
(2) Full blocking sanctions on the largest financial institutions in Russia,
(3) Restrictions on equity for the critical Russian enterprises
(4) Sanctions against 13 Russian oligarchs,
(5) Restriction on Russian high-tech imports such as semiconductors,
(6) Over $50 billion restrictions in key inputs.

All of these sanctions were designed to isolate the Russian economy from "the global financial system, global trade, and cutting-edge technology"[7]. On March 8, US President Joe Biden announced sanctions on Russian oil imports to the US. The EU also said that it will began to rely less on Russia for oil and gas exports, but the EU imports many times more oil from Russia than the US. Russia supplies 45% of EU’s gas and 25% of its import, so the EU definitely cannot impose sanctions on oil as quick as the US, even if it may be the most detrimental to the Russian economy.

A direct result of this is the rising gas prices (see Figure 4). Since the invasion on February 24, crude oil prices have been rising at a nearly vertical rate. It shot up from around $100 per barrel on February 28 to 123 dollars per barrel on March 7. Oil is a key input in many industries, and it is used in the production of nearly everything. It is not only a capital good, but also a product that is used by nearly everyone in their daily life’s. The U.S. still has a massive number of automobiles that rely on oil and gas.

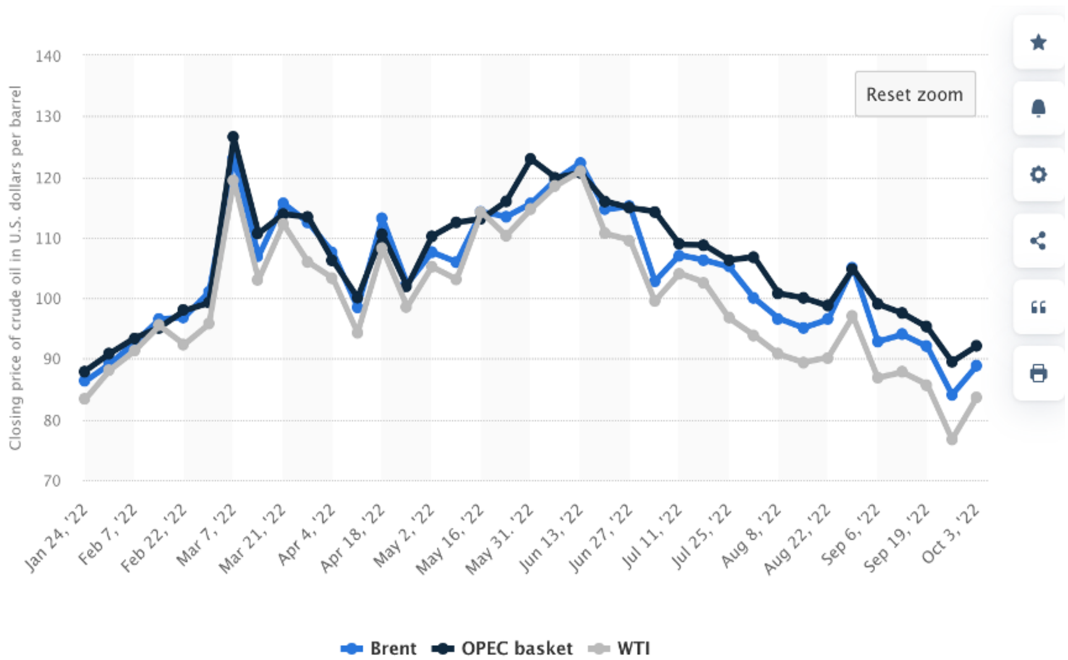

Fig. 4 Weekly Price of Brent, OPEC basket, and WTI crude oil at from 2020 to 2022 [8]

Another key issue that the war has on the US is the rising in food prices. Ukraine and Russia's grain exports account for 20-30% of the world's food supply, and many countries in the Middle East rely almost entirely on Ukraine and Russian grain exports, such as Egypt. However, since the Russian-Ukraine war began, a blockade has been imposed on crucial sea ports to exit Ukraine. Russia's Black Sea blockade has been devastating for many countries in the Middle East and has caused a variety of supply chain issues [9]. With oil and gas prices on the high side, the aggregate supply of the entire US market shifts to the left, increasing the likelihood of stagflation. There is a very high chance right now that the inflation rates are going to shoot up. The subsidies the US government provided to its citizens during the first years of the pandemic may have an influence here, but the effect of the subsidy is much less than that of the actual supply-push inflation rate. In fact, before the Russian-Ukraine war happened, the inflation rate had a decrease in the rate of increase [2]. This means that if the Russian-Ukraine war had not occurred, then inflation would not be at the level it is at right now, which can be seen in Figure 5.

Fig. 5 Inflation rate in US from 2021 to 2022 [9]

The United States has seen a rising inflation rate starting in October 2021, at around 6.2%. CPI data from the US National Bureau of Statistics showed the inflation rate rose to 7.5% in January. After the Russian-Ukraine war started, inflation surged to a record-breaking 8.5%. These kinds of increases in the rise of inflation rates pose threats to daily economic activity. High inflation rates can be detrimental to consumers' buying power; high inflation rates can also make workers demand higher wages, which may lead to hyperinflation. As a result, the Federal Reserve of the United States began to issue a series of monetary policies, primarily raising interest rates, in an attempt to curb inflation. As Figure 6 (Trading Economics, Forbes.com, IMF) shows, when interest rates began to rise, the inflation rate took a while to recover. During COVID-19, U.S. interest rates were lowered in order for the economy to recover after the COVID-19 pandemic. When the US Federal Reserve first raised interest rates to 0.50% on March 17, inflation did not see a sudden drop or a slowdown. It was not until the interest rate reached 1.75 percent that the effectiveness of monetary policies began to show. The inflation rate finally began to decrease after they increased the interest rate to 1.75% percent. The inflation rate peaked at 9.1% and began to decrease afterward.

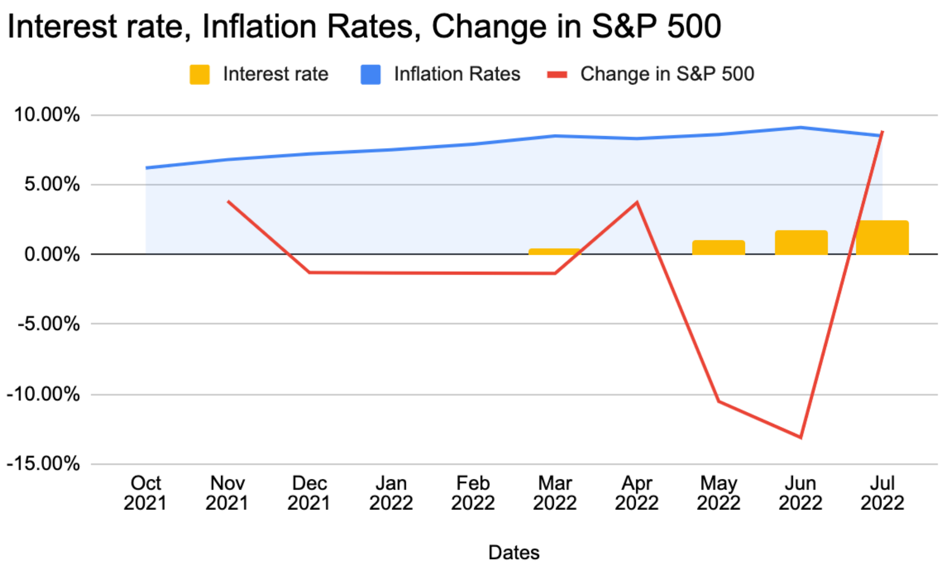

Fig. 6 Interest rate, inflation rate and change in S&P 500 from 2021 to 2022
(Photo credit: Original)

The inflation rates are currently having a negative correlation to that of the stock market. When the S&P 500 index is seeing a decrease, it is a clear indicator that there are fewer people buying services and fewer people who are confident in the stock market. The consumer sentiment is generally lower. The inflation rates have a negative correlation to that of the stock market. As a high inflation rate has the power to decrease consumer spending, a higher inflation rate will also tend to slow down the growth in the stock market as their general purchasing power decreases. This can directly result in a decrease in profit for the major companies with a high market capitalization in the market. Companies with high market capitalization also tend to be the ones who are the most trustworthy among the stock buyers. In general, when a company's stock market picks up, it will mean that more people are willing to buy its stock. However, most people regard stocks as a relatively higher risk investment than other ways of making investments by means such as saving in banks and buying government bonds.

The S&P 500 index is down sharply, a clear indicator that fewer people are buying services and fewer people are confident in the stock market, and consumer sentiment is generally lower. When the economy is booming, the stock market will be going up, but that is not the case for the S&P 500 index right now. When inflation decreased during the month of June 2022, the S&P 500 was able to increase slightly more again. This is due to the investors feeling more confident about the stock market as a result of the CPI and having the S&P 500 index going back up again. It has recovered parts of its growth and sees an eventual rebound to increase back up again. This kind of increase also means that the consumer sentiment was higher when the Federal Reserve was able to decrease the extreme inflation rate. The Federal Reserve's measures in terms of decreasing the inflation rate by raising its benchmark interest rates are effective so far but to a very limited extent. By restraining the money supply, the federal reserve was able to slow down the inflation rate to a certain extent, at least on the demand side of the economy.

There are certainly more complex issues in the US economy when the inflation has been increasing at this rate for such a long time. The aggregate core inflation rate of the American market correlates with the effect of subsidies that the United States receives during the period of inflation. With the Russian-Ukraine war adding to the effect, inflation rose. The core inflation rate is now at 6.6 percent, in comparison to the previous data [9]. This means that there are problems in the US economy that are not a direct result of the Russian-Ukrainian war. Furthermore, the US has a much more independent economy that is not as reliant on Russian imports such as oil and gas than other countries, which will also mean that they are not as affected in comparison to their European counterparts [10]. The United States suffered a far more severe impact from the pandemic since it was much more related to their own sectors in comparison to the effects of the Russian-Ukraine war.

4. Conclusion

Overall, the central banks of the United States need to be aware of the risks associated with the anti-inflationary measures they are having on all the countries of the world. The central banks need to be aware of what is happening to their economies when all of these are happening to the different fields of market, such as stocks, bonds, and real estate markets. The effect of the COVID-19 on the US economy is more apparent than the effect of the Russian-Ukraine war on the US economy. When COVID-19 happened, it affected the US economy directly. This is seen through the effect it had on unemployment, GDP, and the stock market. COVID-19 has changed the way people’s attitude towards work, and this is reflected in the labor force participation rate, which never returned back to the pre-pandemic levels.

The American economy is not as affected by the war in Ukraine as it is now, mostly due to the US's own economic strength; its exports and imports are not as heavily influenced by Russia as its European counterparts. However, given the ever-changing conflict and the range of uncertainty regarding the war and the series of recent issues, no absolutely clear conclusion can be drawn. This paper offers a complete insight into the range of issues caused by the COVID-19 pandemic and also offers a series of comparisons relevant to recent day issues. The limitations of the paper remain that there are many uncertainties surrounding the war and the COVID-19 pandemic, and there is no clear answer as to when the war will end.

References

[1] WHO Coronavirus dashboard, https://covid19.who.int. Last accessed 2022/10/04.

[2] FRED Homepage, https://fred.stlouisfed.org. Last accessed 2022/10/19.

[3] CARES act, https://en.wikipedia.org/wiki/CARES_Act. Last accessed 2022/10/19.

[4] Yahoo finance, S&P 500 index, https://finance.yahoo.com/quote/%5EGSPC?p=%5EGSPC. Last accessed 2022/10/19.

[5] Yuval Noah Harari, Sapiens: A Brief History of Humankind, Signal M&S, 2016.

[6] Bloomsberg, A Visual Guide to the Russian Invasion of Ukraine, 2022/10/10, https://www.bloomberg.com/graphics/2022-ukraine-russia-us-nato conflict/?leadSource=uverify%20wall. Last accessed 2022/10/19.

[7] White House, FACT SHEET: Joined by Allies and Partners, the United States Imposes Devastating Costs on Russia. 2022/2/24. https://www.whitehouse.gov/briefing-room/statements-releases/2022/02/24/fact-sheet-joined-by-allies-and-partners-the-united-states-imposes-devastating-costs-on-russia/. Last accessed 2022/10/19.

[8] Statista, Closing price of Brent, OPEC basket, and WTI crude oil at the beginning of each week from March 2, 2020 to October 17, 2022. 2022/10/17, https://www.statista.com/statistics/326017/weekly-crude-oil-prices/. Last accessed 2022/10/19.

[9] Crystal Futrell, Ron Sterk, Inside the US grains supply-and-demand ‘puzzle’, 2022/08/03, https://www.world-grain.com/articles/17362-inside-the-us-grains-supply-and-demand-puzzle. Last accessed 2022/10/19.

[10] Trading Economics, United States Inflation Rate, 2022/10/13. Last accessed 2022/10/19.