DOI: https://doi.org/10.57125/FEL.2023.09.25.12

How to cite: Gérard, T., & Niyonzima Thomas G. (2023). The Past and the Future Effects of Russian-Ukrainian Conflict on the Democratic Republic of Congo Economic Policy. *Futurity Economics&Law, 3(3). 201-218.* https://doi.org/10.57125/FEL.2023.09.25.12

The Past and the Future Effects of Russian-Ukrainian Conflict on the Democratic Republic of Congo Economic Policy

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Received: July 19, 2023 | **Accepted:** August 21, 2023 | **Published:** September 25, 2023

Abstract: The aim of this research was to investigate the past and the future effects of the Russo-Ukrainian war on the DRC (Democratic Republic of Congo) economy policy. The forecast method based on the UCL: Upper control limit, LCL: Lower Control Limit was used. The data have been collected from various reports of the central bank and Economics Ministry and it concerned the series times collected from 2018-2022. The forecast made in this study concerned the 5-year period from 2023-2027. The results showed that the impact of this war on the various sectors of the Congolese economy was especially positive and negative to macroeconomics various indicators in DRC. After using the SPSS forecasting on 9 variables, 4 variables increased due to the war. Positive effects on the credit economic, will rise from 4.53 initially to 9.42 in 2027, the Bank deposit will also rise from 8.13% in 2022 to 9.97%. Exports from the DRC will increase by 38.06% versus 31.36% initially. On the other hand, 5 variables showed negative effects induced by the Russo-Ukrainian war in DRC. The inflation rate will rise to 80.8% in 2027 from 12.62% initially. Also, the exchange rate, a headache for the current Sama Lukonde government, will reach the overheated level of 3472CDF to the US dollar, compared with the original rate of 2000. The DRC's imports will grow by 44.05% in 2027, reinforcing its dependence on specific foreign products, including machinery and other equipment, and foreign currency oil product prices, which will rise by an average of 12.12% across the country. The innovative aspect of this research was the integration of the behaviors or predilections made on the various macroeconomic variables of the DRC in a 5-year time frame due to the conflict between Russia and Ukraine. Changes in eating habits by adopting consumers' tastes or households to local products that are perfect substitutes for Russian or Ukrainian imports, and monetary policy were envisaged in the paper. In the longer term, the energy transition is no longer an option but a necessity, as the country has the necessary potential in this field. Nevertheless, it remains a perilous path in the sense that it requires fairly substantial capital.

Keywords: Russo-Ukrainian conflict, inflation, transmission channel, prices, DRC.

Introduction

Research Problem and Focus

More than one year the outbreak of the armed conflict between Russia and Ukraine. Given the dominance of each of the warring parties in the global economy, the negative effects, both direct and indirect, on bilateral and even local international trade transactions quickly felt.

The International trade is one of the major vectors of national development. As a result, the trade between countries has intensified over the years, with each country capitalizing on its comparative advantages to take advantage of the global market opportunities. On the other hand, globalization can have adverse effects on economic dynamics at times of crisis. Such crises may be of a health, economic or political nature (Institut National des Statistiques, 2022). The terms of trade will not remain invariant. If export prices rise more than import prices, the country has a positive term of trade, since for the same level of exports it can buy more imports. After the health crisis caused by the COVID-19 pandemic, one of the most significant events of recent years has been the war between Russia and Ukraine, with all its macroeconomic consequences. A conflict with far-reaching repercussions, given that the two countries are major players in the global economy. Russia remains the world's second-largest gas producer, the third-largest oil producer and the leading wheat exporter. Ukraine is the fifth in wheat production. The mid-term forecasts reveal how the conflict has disrupted the fragile recovery from the COVID-19 pandemic, causing a humanitarian crisis around the world, soaring food and commodity prices and exacerbating inflationary pressures. In theory, inflation can be defined as "a sustained and lasting rise in the general level of prices". It excludes localised and temporary increases, and assumes that the price rise is transmitted throughout the economy and repeated in the following period. Disinflation is a fall in the rate of inflation. Deflation is defined as a fall in the general price level. It is generally associated with a recession, i.e. a fall in GDP (negative growth). Hyperinflation is defined by an inflation rate of at least 50% per month. Stagflation refers to a period of high inflation and high unemployment. In the May 18, 2022 UN (United Nations) report on economic development, global inflation is also expected to reach 6.7% this year, double the average of 2.9% recorded for over a decade, with likely sharp rises in food and commodity prices, in this case wheat and energy. In addition, the report of the UN global crisis response group on food, energy and finance confirms that global economic growth has been revised downwards due to the fallout from the war between Russia and Ukraine (United Nations, 2022). According to the World Bank (2022), this war has led to disruptions in national and international value-creation and exchange processes, with negative repercussions for many businesses and economies. For the case in point, there has been a significant drop in global demand for hydrocarbons (-20% consumption), raw materials (-30% demand for copper, nickel and cobalt) and commodities (-25% for soybeans and -28% for wheat) during 2022 (EU NEIGHBOURS east, 2022). The world is currently facing a twin shock, both sanitary and economic. Andrianady et al. (2022) believe that the Russia-Ukraine crisis is having both military and economic knock-on effects. They go on to say that this crisis is a supply and demand shock, influencing international trade in goods and services. The Russia-Ukraine crisis is accompanied by an economic crisis through the three major shocks it is creating, namely: falls in production and demand, the deceleration of global growth and the tightening of financial conditions (and their knock-on effects), and the significant fall in commodity prices, notably the price of oil, which has fallen by around 50% since the start of 2022 (the lowest level for 18 years). In the particular case of the DRC, with its extroverted economy, dependent on the mining sector, and heavily reliant on imported inputs and staples and Ukraine, while already burdened by the COVID-19 pandemic, Cholera, Measles, Ebola, as well as ongoing armed conflicts. All these facts had a negative impact on the country's macroeconomic indicators, notably the growth, inflation, exports, imports, trade balance, etc. (Banque centrale du Congo, n.d.). The balance of payments, on the other hand, "is an account that records the transactions and settlements (of an economic and financial nature) carried out during a period (generally the year or the quarter) between the residents of a country and the residents of other countries". The balance of payments therefore tracks all flows between residents and non-residents over a given period. Economic and financial flows between residents and non-residents are broken down in the balance of payments into the current account, the capital account and the financial account. (Bernier & Simon, 2009).

Due to the emergence of covid-19 and the Russia-Ukraine war, the Congolese economy is forecast to contract from 1.7% Gross Domestic Product (GDP) growth in 2020 to 4.4% in 2022. This under performance is due to the expected drop in global demand for raw materials (down 20.6% on last year), weak financial flows, reduced tourism revenues and lower tax receipts. The deterioration in the external balance, which will undoubtedly have a negative impact on public revenues. This has led to a sharp depreciation of the Congolese franc against the US dollar. The Congolese franc depreciated by 12.4% against the US dollar between 2019 and 2020 (the exchange rates are 1725.49 CDF (Congolese democratic franc) and 1950.83 CDF, representing an acceleration in CDF depreciation of 3.04% and 6.76%, year-on-year, on the interbank and parallel markets respectively) and a depreciation of the national currency, the Congolese franc, by 19.76% between 2020 and 2022. Furthermore, it is indisputable that the Russia-Ukraine crisis is making those who are already vulnerable even more so, as it has a negative impact on the socio-economic conditions of populations and destabilised the households, especially among the most vulnerable. This situation is more acute in the east of the DRC, particularly in the province of Grand Kivu (North and South) and Ituri, where they are affected by the horrors of war, with sexual violence having become one of the modi operandi of armed groups. The M-23/RDF (Rwanda Defense Forces) war is a striking illustration of this situation in the east of the country in North Kivu. The contraction of the GDP growth rate in December is expected to continue into the first quarter of 2022, due to the appearance of several cyclones that hit the country hard during this period. The recovery is expected to continue in the second quarter due to the implementation of government projects, notably aided by the release of funds to support the efforts undertaken by the country's authorities. However, this remains a forecast, and the figures may be subject to adjustment over the course of the year. The impact of the current tension will be felt through the rise in the price of oil, which will lead to a deterioration in the balance of payments, since this commodity is indispensable for supplying the country with energy and transporting goods throughout the 26 provinces of the DRC. There is also a risk of inflation and a threat to national food reserves due to global shocks to the volume of supplies.

Research aim and questions

For these reasons, this study aimed to fill this gap by answering the following research question: What are the past and the future effects of the Russo-Ukrainian war on the economy of the Democratic Republic of Congo?

More specifically, this research had as secondary questions

- What is the positive impact of the Russo-Ukrainian war on the DRC economy?

- What is the negative impact of the Russo-Ukrainian war on the DRC economy?

The following objective was formulated:

❖ To assess the positive and negative effects in past and the future of Russia and Ukraine to the DRC's economy policy.

Literature Review

The literature on the impact of the Russo-Ukrainian war on economies is not new in itself. It has already been the subject of several empirical studies and debates. However, to fully understand this relationship, it was important to look at the conclusions drawn by those who support the positive effects of the crisis, on the one hand, and those who have argued for its negative effects, on the other.

Previous studies on the economic consequences of the war have shown that armed conflicts have significant economic consequences. Some researchers agree that there are two schools of thought on the effects of war. These are Glick and Taylor (2010), Ganegodage and Rambaldi (2014), Bluszcz and Valente (2019), Hoffmann and Neuenkirch (2017), Liefert et al. (2019), Dreger et al. (2016).

The war revival that war can have a positive effect, because it reduces the power of extraordinary interests, brings innovation and improves economic efficiency by increasing human capital Benoit (1973; 1978), which is in line with Keynesian economic theory.

On the other hand, the "ruins of war" school of thought views war as a devastating event with no economic benefits (Kang & Meernik, 2005). Specifically, crude oil prices have long been considered a leading economic indicator, as suggesting a significantly negative relationship between high oil prices and future economic growth (Hegarty, 2022; Benton et al., 2022; Ben Hassen & El Bilali, 2022). Other researchers have pointed out that poor countries are more likely to suffer from civil war particularly when poor countries suffer from negative income shocks (Chassang & i Miquel, 2009). Other studies have empirically estimated the economic effect of wars. Koubi (2005) studied the effect of military conflicts between nations on economic growth nations from 1960 to 1989 its find concludes that the variation economic growth between countries was methodically linked to the characteristics and occurrence of the war. Studies show that the post-war economic output is positively correlated with conflict severity and duration. Also its growth-promoting effect growth varies negatively with the country's level of economic development. In their study, Kang and Meernik (2005) examined the effect of civil war on several economies from 1960 to 2002, they found that wars have a negative impact on economic fundamentals, and that the international community's response to the civil war had a strong impact on economic growth. Collier (1999) developed a model to test the economic effects of all civil wars since the 1960. Its findings showed that the economy recovered rapidly after a long civil war, but continued to grow a long civil war, but continued to contract after a short war. The Nordhaus (2002) showed that war is very expensive, with the estimated cost of the Iraq war over a decade ranging from $100 billion to $1.9 trillion.

On the other hand, the negative socio-economic consequences of the war are undeniable, as evidenced by various studies (Didast & Mdarbi, 2022). The economic impact of the grain export disruption has been caused by the Russia-Ukraine war (Rose et al., 2023). Sokhanvar and Bouri (2023) find that the war in Ukraine and new sanctions imposed on Russia have affected commodity prices and induced historic moves in exchange rate markets. In Europe the literature shows that Russia's invasion of Ukraine is a major shock at the heart of the bread basket at a time when global stocks are running short (Legrand, 2023; Havlik, 2014). The world's major powers, such as the USA and the majority of European union countries, have imposed sanctions against the sponsors of this conflict. This arises a wide range of new economic sanctions on Russia in response to the military attack on Ukraine. These sanctions include various restrictive measures on trade with Russia. Food is one of the most traded goods, and the conflict in Ukraine, one of the European breadbaskets, has triggered a significant additional disruption in the global food supply chains after the COVID-19 impact (Simola, 2022). The disruption to food output, supply chains, availability, and affordability could have a long-standing impact (Carter & Streinbach, 2023). As a result, the availability and supply of a wide range of food raw materials and finished food products are under threat, and global markets have seen recent increases in food prices. Furthermore, the Russian-Ukrainian war has adversely affected food supply chains, with significant effects on production, sourcing, manufacturing, processing, logistics, and significant shifts in demand between nations reliant on imports from Ukraine (Jagtap et al., 2022).

The current tension is creating supply constraints, leading to higher prices fort he agricultural products (Food and Agriculture Organization, 2022; Leiva, 2022; Ozili & Arun, 2022; Polityuk & Evans, 2022; Ali et al. (2022)). Andrianady et al. (2022) analyzed the impacts of the war between Russia and Ukraine on the Malagasy economy. Their main find was that the Chanel of transmission of the shock resulting from this tension is the variation in the price of oil, which will generate a deterioration in the balance of payments and a general increase in the price of raw materials in the energy sector and the transport of goods, which remains dependent on oil.

This negative effect is on : the reduction in the rate of economic growth, the impact on poverty, the cost of wheat, corn and cereals in general, food insecurity of food, disruptions in global supply chains and financial markets, reduction in women's participation in the household basket. At the end, others argue that the war has no effect on the economy (Kang & Meernik, 2005). At the end Carter and Streinbach (2023) analysed the future effect of the Russian and Ukrainian war on the grain prices overreact.

Research Methodology

General Background

Reed et al. (2021) seems interest in impact evaluation has rapidly grown as research funders increasingly demand evidence that their investments lead to public benefits. Recognizing the subjective nature of impacts as they are perceived by different groups in different times, places and cultures, the research impact evaluation was defined as the process of assessing the significance and reach of both positive and negative effects of research. Five types of impact evaluation design were identified encompassing a range of evaluation methods and approaches as experimental and statistical methods; textual, oral and arts-based methods; systems analysis methods; indicator-based approaches; and evidence synthesis approaches.

Sample

The data used were the series times collected from 2018-2022. These data have been further processed to correct certain observation errors.

Instrument and Procedures

To analyse these trade exchanges were secondary data taken from the various reports of the BCC and the Ministry of the Economy, through the various official decrees and official communications, as well as the special note from the INS.

Data Analysis

This article used the experimental and statistical methods by showing the SPSS results. The forecast method based on the UCL: Upper control limit, LCL: Lower Control Limit was used. The data have been collected from various reports of the central bank and Economics Ministry.

Research Results

The results of this research are presented in the tables and graphs below.

Stylized facts

Table 1

Selected macroeconomic indicators in the DRC (% GDP)

Years	2018	2019	2020	2021	2022
Inflation rate	11,45	54,7	7,22	4,58	3,2
Exchange rate	1281	1650	1670	1705	2000
Credit to the economy	6,91	5,7	5,5	5,52	4,53
Bank deposits	8,9	8,1	8,3	8,5	7,5
Exports of goods and services	32,35	30,69	34,34	32,07	29,2
Of which mining	22,48	29,08	33,79	31,53	30
Imports of goods and services	38,34	34,62	37,95	35,22	32,12
Trade balance	-0,71	0,55	2,12	1,32	-0,6

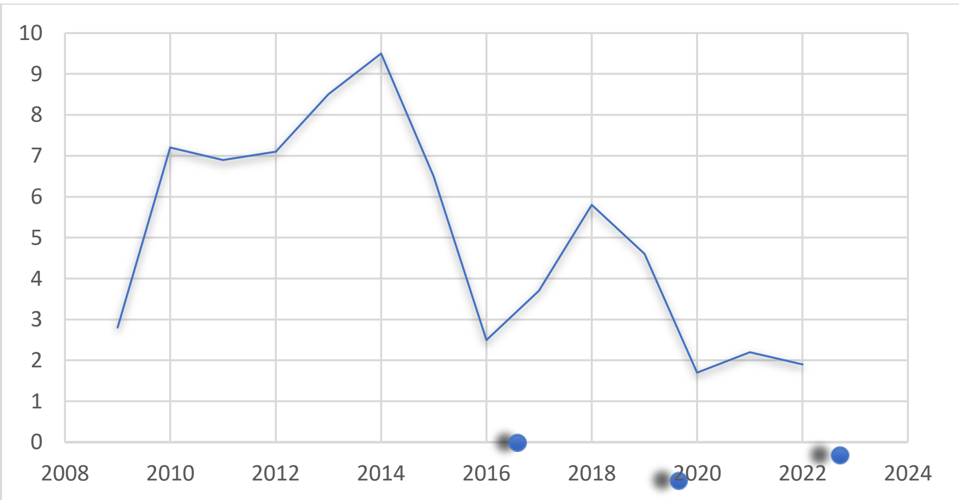
Source: Banque centrale du Congo (n.d.)

DRC trade with Russia and Ukraine

Generally speaking, Russia and Ukraine are not among the DRC's major trading partners. They rank poorly with China, India, Belgium, South Africa and the USA. However, in terms of products, the share of trade in some goods remains interesting to note. In terms of imports, wheat and flour are among the most sought-after products in the DRC. Russia accounts for 4% (average over the last three years) of all wheat imports into the DRC. As for flour from Ukraine, its share of imports remains fairly meagre (averaging 1% of the total since the advent of COVID-19 in 2020).

Figure 1

Economic growth in the DRC



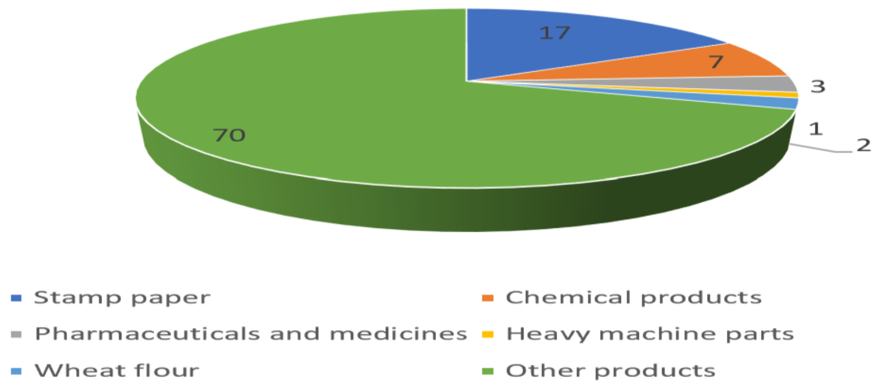
Source: Constructed by the authors from Banque centrale du Congo (n.d.)

Impact on international trade

In terms of value, stamped paper or Bond (17%), chemicals (6.8%), medicines (3%), parts and components (1.2%) and wheat (1.6%) and other products, notably vehicles, food products and agroindustry, petroleum products and others (70.4%). The DRC remains heavily dependent on the outside world for its food consumption. This significant drop in external purchases is a marker of the sharp slowdown in economic activities experienced by the DRC since 2020 (cessation of non-essential activities) associated with a significant loss of purchasing power for the population. Degryse (2019) considers that "exporting consists, for a company established on a national territory, in selling part of its production outside its borders. Importing is the purchase by this company of foreign products".

Figure 2

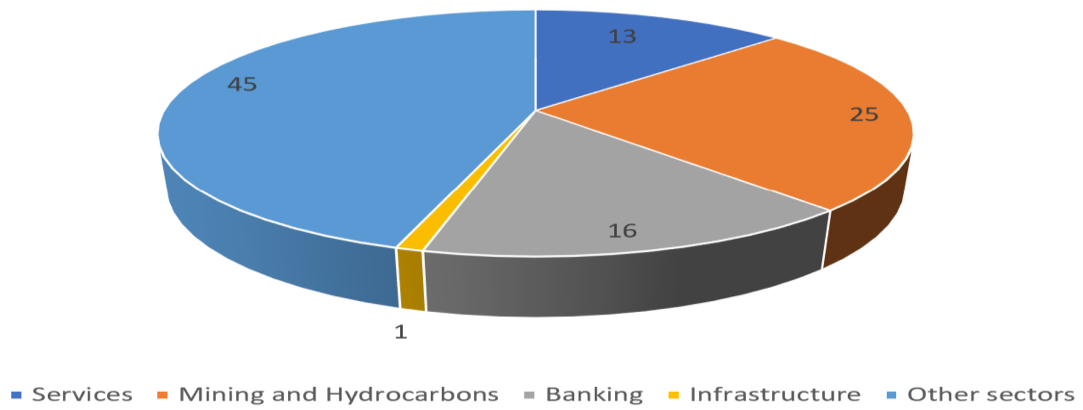
Structure of DRC imports (in USD over the 2017-2022 period)



Source: Constructed by the authors from Banque centrale du Congo (n.d.)

Figure 3

Imports by sector

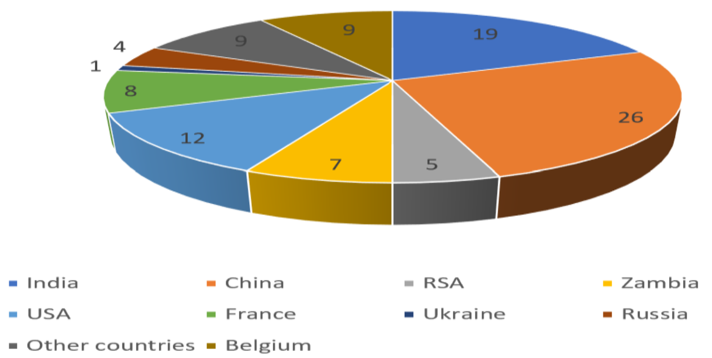


Source: Constructed by the authors from Banque centrale du Congo (n.d.)

Figure 4 shows that, with a market share of 4%, Russia will be the DRC's sixth largest import partner in 2022, overtaken today by China (27%), and followed by India and the USA, which accounted for 19% and 12% of total imports respectively. Asia remains the leading geographical zone for DRC exports, absorbing 82% of total sales, or around 2 billion in value (oil and wood), followed by Europe (8%), America (6%) and Africa (3%). China is its biggest customer. It accounted for 77% of exports in 2020, followed by the United States (3.4%), India (2.8%) and Peru (2.6%), other customers of Congolese oil which ranked second, third and fourth respectively. Exports to the rest of Africa, at 3%, underline the current lack of regional integration, reflecting weak diversification.

Figure 4

Share of DRC's foreign trade partners (average 2017-2022)

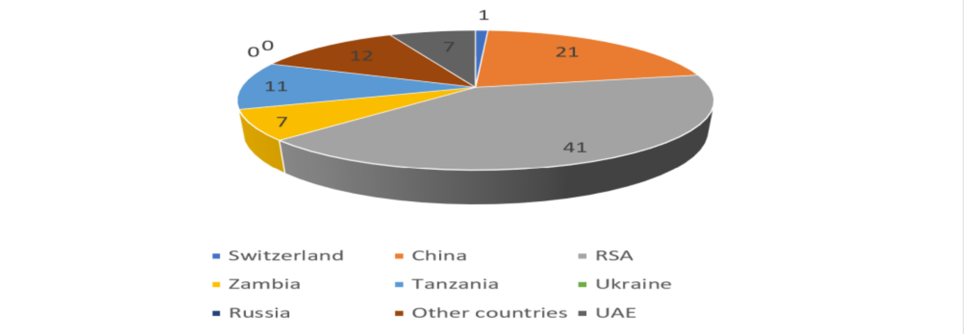


Source: Constructed by the authors from Banque centrale du Congo (n.d.)

From the diplomacy of wheat, the world's leading exporter, Russia has led what Vircoulon quoted by Tsafack Nanfosso (2022) calls "a diplomacy of wheat" in Africa, where some countries are highly dependent on food. Egypt buys three-quarters of its imports from Russia, while Algeria, whose relations with France have cooled, has turned to Russian wheat. Its other customers are mainly Nigeria, Tanzania, Kenya, South Africa and Sudan, one of whose leaders was in Moscow to finalize a wheat delivery at the start of the conflict with Ukraine. Over the 2018-2020 period, no fewer than 25 African countries import more than a third of their wheat from these two countries, and 15 of them import more than half. Countries such as Sudan (75%), DRC (68%) and Senegal (65%) also rely heavily on these two sources of supply. While the majority of countries turn to Russia, which supplies the continent with 32% (compared with 12% for Ukraine), Tunisia, Libya and Mauritania rely heavily on Ukrainian wheat (30-50% of their imports) (Tsafack Nanfosso, 2022). In terms of value, Russia is one of the top 10 suppliers of goods to the DRC. Imports from this country have risen steadily over the years, ranking 9th among the DRC's supplier countries. Among the products imported from Russia, wheat and sulfur are the main imports. Exports from the DRC to Russia are structurally low. These exports have fallen from 45 million CDF in 2014 to 35 million CDF in 2021. In the case of Ukraine, imports from this country have increased over the years (except for the drastic drop in 2020). It ranks 52nd among the DRC's supplier countries. Rubber processing machinery" is the product imported most from Ukraine. It accounts for 20.8% of imports from Ukraine. It is followed by "Meat and edible offal, fresh, chilled or frozen" and "Semi-finished products of iron or non-alloy steel", which each account for 16.1% of imports from Ukraine. Wheat accounts for 13.2% of these imports. In terms of supplier countries, Ukraine is the DRC's third-largest supplier of "Machinery and equipment for rubber processing. Its alone accounts for 15.5% of our imports of "Machinery and equipment for rubber processing". Ukraine is also the 11th largest supplier of "Meat and edible offal, fresh, chilled or frozen", accounting for 2.4% of our imports of this product.

Figure 5

Export destinations of the DRC



Source: Constructed by the authors from Banque centrale du Congo (n.d.)

Table 2

Price structures of petroleum products in the DRC

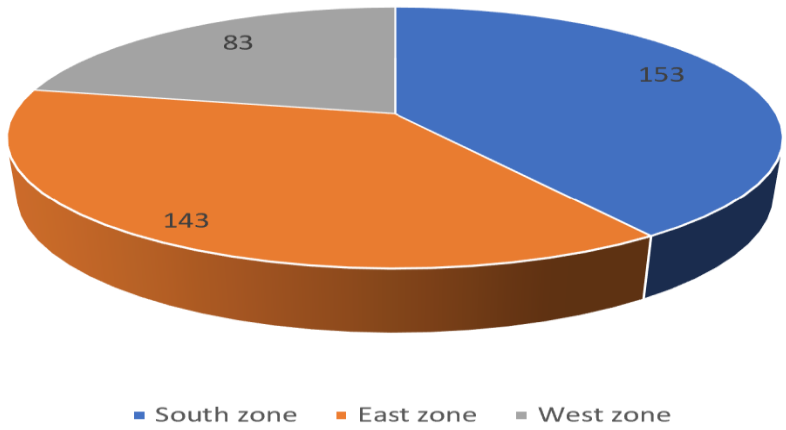
	East			**West**			**South**		
	Gasoline	Diesel	Kerosene	Gasoline	Diesel	Kerosene	Gasoline	Diesel	Kerosene
2017									
January	1,380	1,390	1,230	1,615	1,605	1,250	1,340	1,330	1,200
April	1,380	1,390	1,230	1,650	1,640	1,285	1,340	1,330	1,200
May	1,380	1,430	1,260	1,730	1,720	1,340	1,400	1,390	1,255
July	1,420	1,430	1,260	1,730	1,720	1,340	1,400	1,390	1,255
September	1,420	1,430	1,260	1,730	1,720	1,340	1,400	1,390	1,255
November	1,420	1,430	1,260	1,730	1,720	1,340	1,400	1,390	1,255
2020									
January	1,500	1,540	1,400	1,995	1,985	1,420	1,390	1,450	1,300
April	1,500	1,540	1,400	1,995	1,985	1,420	1,390	1,450	1,300
May	1,500	1,540	1,400	1,995	1,985	1,420	1,390	1,450	1,300
Jully	1,500	1,540	1,400	1,995	1,985	1,420	1,390	1,450	1,300
September	1,950	1,970	1,630	1,995	1,985	1,430	1,820	1,920	1,700
November	1,950	1,970	1,630	1,995	1,985	1,430	1,820	1,920	1,700
2022									
January	2450	2400	1,500	1,995	1,985	1,600	2,495	2,490	2,050
April	2650	2600	2,150	2,195	2,185	1,800	2,695	2,690	2,250
May	2800	2750	2,300	2,395	2,385	1,950	2,695	2,690	2,250
Jully	3100	3050	2,600	2,695	2,685	2,250	2,695	2,690	2,250
September	3400	3350	2,750	2,695	2,685	2,250	3,345	3,335	2,850
November	3400	3450	2,900	2,855	2,845	2,450	3,345	3,485	3,000
Variation %	146.38	148.2	135.772	76.78	77.26	96	149.63	162.03	150

Source: Constructed by the authors from data from the Banque centrale du Congo (n.d.) and MINEPAT (n.d.).

The transmission channel for the dynamics of petroleum product prices in the DRC is through the different economic zones. The greatest price volatility was observed in the South zone, with an average variation of 153% for these three products, compared with 143% in the East zone and 83% in the West of the country. In the first two zones, the impact of variations in the price of Brent crude is more closely linked to the fact that supplies in the East zone pass through the East-Arab-China corridor, and in the South zone through the South-African corridor, which touches the Indian Ocean coast. These two corridors are made up of the BRICS countries, where Russia's oil production shocks are directly felt. However, supplies to the West zone depend mainly on the port of Matadi, which receives products from Europe and West Africa on the Atlantic coast.

Figure 6

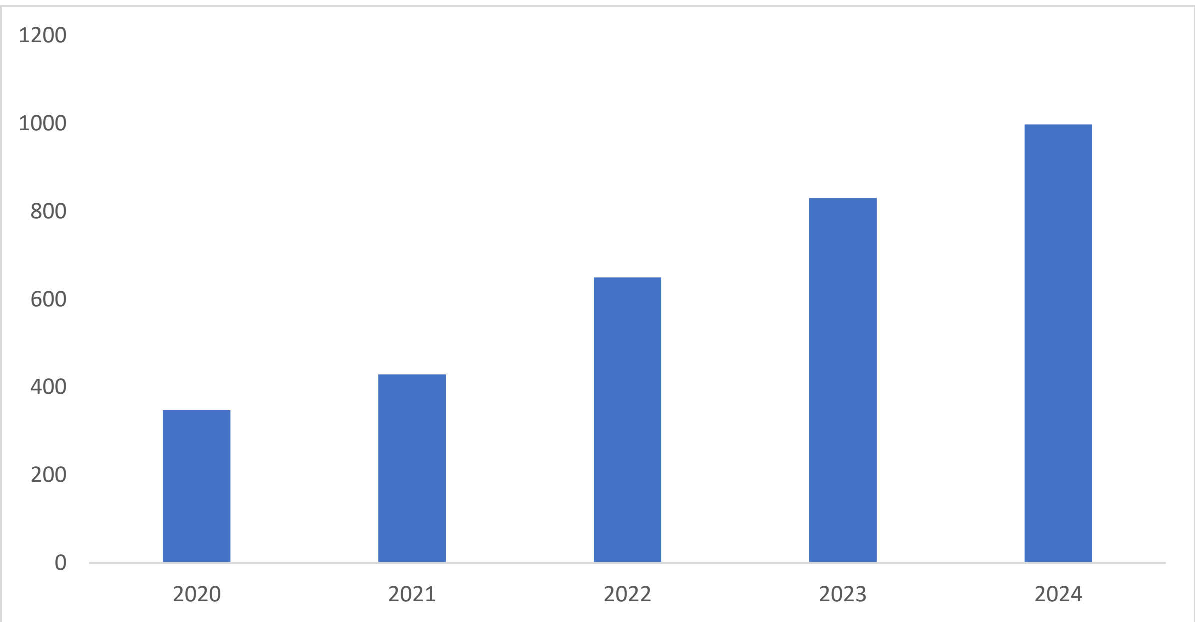
Percentage variation in price



Source: Constructed by the authors from data from the Banque centrale du Congo (n.d.) and MINEPAT (n.d.)

Figure 7

Goods balance 2020-2024 in Millions USD



Source: Constructed by the authors from Banque centrale du Congo (n.d.)

Future impact analysis on macroeconomic variables

Table 3

Forecast of macroeconomic indicators for the DRC economy

Global Indicator		2023	2024	2025	2026	2027
Inflation		12,62	12,62	12,62	12,62	12,62
	UCL	78,42	79,02	79,62	80,21	80,80
	LCL	-53,18	-53,79	-54,38	-54,98	-55,57
Exchange Rate		2000,00	2000,00	2000,00	2000,00	2000,00
	UCL	2658,21	2930,86	3140,06	3316,43	3471,81
	LCL	1341,78	1069,14	859,94	683,57	528,19
Credit of Economy		4,53	4,53	4,53	4,53	4,53
	UCL	6,72	7,62	8,32	8,91	9,42
	LCL	2,34	1,44	,74	,15	-,36
Bank deposits		8,13	8,13	8,13	8,13	8,13
	UCL	9,73	9,80	9,86	9,92	9,97
	LCL	6,52	6,46	6,40	6,34	6,28
Exports		31,36	31,36	31,36	31,36	31,36
	UCL	37,44	37,60	37,76	37,91	38,06
	LCL	25,28	25,12	24,96	24,81	24,66
Of wich Mining		30,00	30,00	30,00	30,00	30,00
	UCL	41,88	46,80	50,57	53,75	56,56
	LCL	18,12	13,20	9,43	6,25	3,44
Imports		34,98	34,98	34,98	34,98	34,98
	UCL	42,89	43,19	43,49	43,77	44,05
	LCL	27,07	26,76	26,47	26,18	25,91
Trade Balance		,38	,38	,38	,38	,38
	UCL	4,19	4,26	4,32	4,39	4,45
	LCL	-3,42	-3,49	-3,56	-3,63	-3,69
Gasoline East		2,97	2,97	2,97	2,97	2,97
	UCL	7,06	8,75	10,05	11,14	12,11

	LCL	-1,12	-2,81	-4,11	-5,20	-6,17
Diesel East		2,93	2,93	2,93	2,93	2,93
	UCL	6,81	8,42	9,66	10,70	11,62
	LCL	-,95	-2,56	-3,80	-4,84	-5,76
Kerosene East		2,37	2,37	2,37	2,37	2,37
	UCL	5,17	6,33	7,21	7,96	8,62
	LCL	-,43	-1,59	-2,47	-3,22	-3,88
Gasoline West		2,47	2,47	2,47	2,47	2,47
	UCL	4,17	4,87	5,41	5,86	6,26
	LCL	,77	,07	-,47	-,92	-1,32
Diesel West		2,46	2,46	2,46	2,46	2,46
	UCL	4,16	4,86	5,40	5,85	6,25
	LCL	,76	,06	-,48	-,93	-1,33
Kerosene West		2,05	2,05	2,05	2,05	2,05
	UCL	3,99	4,79	5,41	5,93	6,39
	LCL	,11	-,69	-1,31	-1,83	-2,29
Gasoline South		2,88	2,88	2,88	2,88	2,88
	UCL	7,01	8,72	10,04	11,15	12,12
	LCL	-1,25	-2,96	-4,28	-5,39	-6,36
Diesel South		2,90	2,90	2,90	2,90	2,90
	UCL	6,89	8,55	9,81	10,88	11,83
	LCL	-1,09	-2,75	-4,01	-5,08	-6,03
Kerosene South		2,44	2,44	2,44	2,44	2,44
	UCL	5,57	6,86	7,86	8,69	9,43
	LCL	-,69	-1,98	-2,98	-3,81	-4,55

Source: Constructed by the authors from Banque centrale du Congo (n.d.) in SPSS

The table 3 shows the forecast for the DRC's macroeconomic aggregates. All other things being equal, the striking fact, the results below show that the effects of war on the DRC economy are twofold :

Positive effect. After using the SPSS forecasting on 9 variables, 4 variables will be increased due to the war. The results obtained show positive effects on the credit economic, which will rise from 4.53 initially to 9.42 in 2027. Bank deposit will also rise from 8.13% in 2022 to 9.97%. Exports from the DRC will increase by 38.06% versus 31.36% initially. This increase in exports will lead to an improvement in the trade balance of 4.45% versus 0.38% initially.

Negative effect. On the other hand, 5 variables show negative effects induced by the Russo-Ukrainian conflict in DRC. The results obtained show that the inflation rate will rise to 80.8% in 2027 from 12.62% initially. Also, the exchange rate, a headache for the current Sama Lukonde government, will reach the overheated level of 3472CDF to the US dollar, compared with the original rate of 2000. The DRC's imports will grow by 44.05% in 2027, reinforcing its dependence on specific foreign products, including machinery and other equipment, and foreign currency. Finally, the effects of the war will be passed on to oil prices, which will rise by an average of 12.12% across the country.

Discussion

Toward the question regarding the positive and negative effect of the war, this shows out that the DRC, should not have to swap its oil supply source, but rather rationalise its recently traced oil blocks across the country to secure the available stock. The DRC could be the winner of the conflict by exporting the oils as the others countries.

The future effect on the DRC's economy policy is negative. The research showed the reduction in the rate of economic growth, the impact on poverty, the instability of the exchange rate, the high inflation of all goods and oils, the cost of wheat, corn and cereals in general and prices of petroleum products. These findings of the current study are consistent with those of previous studies such as Andrianady et al. (2022), Ben Hassen and El Bilali. (2022), Food and Agriculture Organization (2022), Welsh et al. (2022). These studies collectively reaffirmed the negative effect of the Russia and Ukraine war in some economies in Europe and the Africa. For the studies interested by the future effect of the war, Carter and Streinbach (2023) analysed the future effect on the grain prices in developing world. The authors find that the Russian invasion raised the future prices of grain and over growing food securities issues in the developing countries. This study goaled the same effect and involved the below findings by adding oil products, especially in DRC.

This research also enriched the current literature of Didast and Mdarbi (2022), Rose et al. (2023), Sokhanvar and Bouri (2023), Legrand (2023), Hegarty (2022), Benton et al. (2022), Simola (2022), by forecasting the future impact of the war on DRC economy. The above researches analyse only the impact without doing the prediction's effects.

This study again enriched the current literature of the study of Tchouassi et al. (2023) where the Researchers analysed the effects of Russian and Ukraine conflict on the DRC economy. The current studies deepens this by integrating the effects in the past and the future for the same country the DRC.

At the end the findings of this study focused on the macroeconomics indicators in past and the futures and did not consider the others aspects like the negative effects on the food insecurity of food products, on human capital (discrimination of foreign students in Russia or Ukraine), disruptions in global supply chains and financial markets, reduction in women's participation in the household basket, the results of the researches by Glez (2023), Jagtap et al. (2022), Food and Agriculture Organization (2022), Leiva (2022), Ozili and Arun, (2022), Polityuk and Evans (2022), Ali et al. (2022).

Limitations

The limits of this study are on the lack of econometric approach by

- Urban and rural Limitation: The research was primarily focused on the global economy did not include the household behaviors in especially urban and rural Congolese areas and the responses of various sectors of the DRC economy.

- Editing time constraints: Due to a tight timeline, the researchers had limited time for distributing the survey, potentially reducing the sample size and affecting the generalisability of the results.
- Data collection methods: The date collected on the national and local reports were only used. It might have limited the depth and richness of the data collected, particularly if it was possible to use the World Bank data and the others international data bases.
- Sample Selection: The employed convenience sampling strategy may have introduced bias into the study, limiting the 5 years only to generalise the findings in the long term.

Conclusion and implications

The DRC has been the hardest hit by the effects of the war between Russia and Ukraine, in view of the extra-version and non-diversification of its economy. Indeed, Russian's invasion of Ukraine is putting the world economy, still reeling from a pandemic, back under pressure. Like most African countries, the DRC is suffering the adverse effects of the Russian-Ukrainian war on its economy through the rise in prices of imported products such as oil and wheat, on which it depends. The Russian-Ukrainian war has had, and continues to suffering adverse effects on the economies of developed and underdeveloped countries. In view of this, the given research has focused on analysing the past and future effects of this conflict on the economy of the DRC. This research analysed the past and future positive and negative effects of this crisis on the DRC's macroeconomic indicators.

The hypothesis assumed that the Russian-Ukrainian conflict would have positive and negative effects in the past as well as in the future, despite the extroverted Congolese economy and its inability to influence world prices.

The results of this research showed that the effects of this crisis were mainly negative on the macroeconomic indicators of the DRC, notably the level of inflation 80.8%, the exchange rate 3 472 CDF for one dollar, the prices of petroleum products will arise 12% in 2027, the balance of trade, economic credit and bank deposits, both in the past and in the future. Also, positive effects on the credit economic, which will rise from 4.53 initially to 9.42 in 2027, the Bank deposit will also rise from 8.13% in 2022 to 9.97%, Exports from the DRC will increase by 38.06% versus 31.36% initially were showed. The below results confirmed the research hypothesis. In summary, this research provided an important foundation for the forecasting of impact of the foreign conflict to the small economy as DRC. It underlined the gaps in the current study, charting avenues for future exploration and enriching the understanding of the interplay macroeconomics indicators behavior. The study concluded by reiterating its contribution to the war's field integration of the behaviors or predilections made on the various macroeconomic variables of the DRC in a 5-year time frame due to the conflict between Russia and Ukraine both in terms of advancing academic knowledge and offering valuable recommendations for practical application.

Implications

The conclusions drawn from this study made important contributions to academic discourse and practical applications in economics. From an academic point of view, this study enriched the understanding of the economic policies applied by states during the foreign war. It also demonstrated the importance of the rational choice theory of consumption through changing tastes, the body of knowledge concerning the macroeconomic policies applied by countries during the time of war. This study also identified the theoretical aspects of food security and the supply chain, the notion of energy transition, and strengthens public and private initiatives by highlighting the 3C's initiative (Congolese Consume Congolese). Finally, this research enriched new orientations on intra and inter regional trade in Africa. It also advocated future explorations to improve and consolidate knowledge in this area.

In practice, the knowledge drawn from this study offers governments and other economic agents an arsenal of basic tools for their decisions in times of crisis and post-crisis. It emphasises the importance of giving priority to the diversification of supply sources, energy transition is a necessity. This study constitutes an interpellation Congolese leader in face of country's enormous potential in renewable energy is still under-exploited, notably thanks to its high level of annual sunshine, its rivers and streams, and its potential for hydroelectric dam projects, coupled with its dependence on fossil fuels and fluctuating fuel oil prices (due to the tension between Russia and Ukraine). This research continued liberalisation of the energy sector is a welcome response to this shock. In the longer term, the energy transition is essential, given that the country's energy sector is highly dependent on oil, which, unfortunately, is frequently subject to a number of shocks. The country boasts a number of hydraulic dams, such as the great INGA and Lake Kivu, which holds a large untapped stock of methane gas, as well as a very sunny climate for solar panel projects. This study highlighted the importance of prioritising intra-African trade values that were once overlooked and weak in business operations and using specific re-marketing techniques to improve reach and engagement. It also inspired monetary policies to be more accommodating, focusing on inflation targeting, controlling capital flight for foreign exchange, controlling foreign exchange reserves and raising the interest rate. The research also involves the DRC's accession to a monetary union zone for a single currency remains a possibility. It was also encouraging the restrictive fiscal policies. Which reduce the cost of living of institutions and directing budget surpluses towards value-added investment projects.

In the absence of capital, this transition remains a major challenge, since it requires a significant amount of capital. Only real and artificial attractiveness policies can help the DRC to attract FDI to support the energy transition.

Future Research

- We are suggesting for the future research to use the cointegration model for Granger and Engel.
- Introducing a Panel model with the effect on each province in the DRC.
- Survey on the household behavior in responding of the Russian and Ukraine crisis
- Analyzing the public investment towards the crisis in DRC
- Analyze the impacts on the economic sectors, agriculture, industry and services to know which sector of the economy bore the brunt of the war
- Analyzing the future effect of the food securities in undeveloping countries.

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