



Submitted to:

Prof Dr. Talha Ali Khan and Prof. Ebby George Varghese

University of Europe for Applied Sciences, Potsdam.

Presented By:

Group:4

- *Mohammd Zaid Babalu Shaikh – 31280231*
- *Bharani Sadineni – 44351657*
- *Miguel Alberto Ponce Sánchez – 51486884*
- *Ayda Mokhtarzadeh – 87059554*
- *Garikapati Seetharam Chowdari – 58705278*
- *Manasa Maringanti – 27708106*
- *Vignesh Thota – 47623256*
- *Burak Mutlu Kökakin - 75585915*

1. ABSTRACT

After Covid 19 there are significant changes in the global economy and World Trade. As the world is going through a lot of economic and recession crises due to war in Russia and Ukraine and between Israel and Palestine. many countries are shifting their trade options from the dollar to their currency. One such kind of currency is BRICS where a group of nations aligns together such as Brazil Russia, India, China, south Africa, Iran Ethiopia, and Egypt form a currency called BRICS many countries United Arab Emirates want to be a part of this BRICS and Very recently UAE Stopped its trade in dollar. Not only because of world economic crises but also political crises such as lack of proper leadership skills. Gold Reserves are key assets of any country. Many countries store their gold in the Bank of England in London which is the world's second gold deposit where these reserves are used during crises for financial stability. When disaster strikes, they have reliable funds because gold always holds its value. Countries like Togo and Zimbabwe are Doing Gold Trade with BRICS Science 2017 Countries These countries want to be independent and financially stable during economic sanctions and natural calamities BRICS is planning to form its currency based on blockchain technology for regular World Trade and BRICS is Backed with Gold by Many Countries.

2. INTRODUCTION

2.1 START OF GOLD TRADE

TOGO

Togo's gold mining industry extends back to the early Ashanti Kingdom. The huge Ashanti kingdom included areas of modern-day Togo. The kingdom was well known for its gold. Some of the alluvial gold used in trade within the kingdom was mined in rivers and streams in modern-day Togo. However, most of this gold was on a modest scale, and the amount of gold in the territory did not attract the British imperialist's interest after the region became colonized. As a result, little gold was mined during the colonial period. After Independence, most of the mining activities focused on phosphate and other minerals with less concentration on gold. However, the increased gold prices in the past decade restored the gold development in the country. Togo's Ministry of Mines and Energy controls gold mining. So, if you want to invest in the sector, you must first contact the Directorate General of Mines and Geology within the Ministry of Mines and Energy to obtain permission to explore or purchase an existing gold property. Mining is governed by the Mining Law No. 96-004/PR of 1996. The introduction of this mining law, as well as the policy of opening the mining industry for investment, are helping Togo to improve its status as an African gold producer.

ZIMBABWE

Gold mining in Zimbabwe dates to the 13th century, when indigenous people collected gold from the hills surrounding their kingdoms. Spanish and Portuguese visitors in the 16th century attested to this by trading gold with the natives. Gold mining was taken up by European settlers once colonial rule began in the 1880s. During colonial authority, white settlers established several commercial gold mining operations, but the majority of Zimbabwe's gold reserves remained undiscovered. After winning independence in 1980, Zimbabwe's new government launched attempts to discover and mine gold by licensing gold exploration and mining enterprises. Zimbabwe has several active gold mines producing several tons of gold each year. In addition, the government has licensed several foreign firms to explore for more gold deposits in several regions within the country. Some of the major gold mines in Zimbabwe includes Sabi Gold Mine, Jena Gold Mine, Blanket Gold Mine.

2.2 AFRICA AS GOLD PRODUCER

Gold in Africa was exploited in ancient times not only by the ancient Egyptians but also by black Africans in the region known today as Ghana, and once known as Gold Coast, and its neighbors although later. Africa may possess greater potential for undiscovered gold deposits than any other region on Earth. Investigation efforts in several countries have been severely restricted by the financial difficulties of many gold-bearing areas. Goldsmiths proliferated in the new mining districts, and they set up workshops in the coastal towns and villages where the gold trade was carried on. The Gold of Africa Museum in Cape Town displays an excellent collection of African gold.

2.3 HEGEMONY OF THE US DOLLAR AND ABANDONMENT OF THE GOLD STANDARD

After World War II, the US dollar became and continues to be the global reserve currency. This status in international trade and investment has allowed the United States to use global power. In recent years, competing nations like China, Russia, and Iran, have attempted to supplant the dollar's exclusive status in international commerce. Their objective is to damage the US's capacity to maintain its position as the world's leader. It is suggested that this conclusion is unlikely to occur in the years to come because of ongoing reliance on the US currency.

US President Nixon rejected the gold standard in 1971. Under the gold standard, the value of the national currency is set at the price of gold. This is not the same as the current money system. Government money has a fixed value regardless of the product it is used to purchase. Throughout history, both contemporary countries and ancient civilizations have employed the gold standard. The United States adopted a fiat-money based monetary system in place of the gold standard, which it abandoned in the 1970s.

3. BRICS influence over Africa

This project seeks to investigate the intensified efforts of BRICS nations (Brazil, Russia, India, China and South Africa) in terms of their influence on African terrain by examining principal influencers alongside trading proxies. It underscores the intricate geopolitical and economic partnerships that determine Africa's prospects, illustrating precisely how much these up-and-coming powers influence Africa in progress.

China: The Dominant BRICS Player in Africa

Central Africa has for years been under EU development schemes, but these now have very limited access to funds in an era of austerity and are being largely crowded out by China via its Belt Road Initiative backed by huge Chinese new infrastructure investments continent-wide. They do resource extraction, construction projects and telecommunications. China has also signed a series of trade agreements and extended generous portions of humanitarian assistance to African countries, thereby broadening its economic control as well as political influence within the continent. This increased engagement has brought about large changes in Africa's development landscape and China now plays a key role in the growth of its new partner.

Russia: Strategic Interests in Africa

While Russia has been depending on its influence in Africa through military cooperation and energy deals. A private military company, the Wagner Group has operated from several African lands to render security services and train expeditionary forces. Russian state-owned entities continue to invest billions of dollars in oil, gas and nuclear items with strategic partners within Central Africa. These are more, major Russian energy companies are involved in mining and exploration activities which also confirms them as participants of the region. These diplomatic efforts markedly expanded Russia's geopolitical presence and economic relations throughout the African continent.

India: Soft Power Approach

Using its historical and cultural ties to the continent, India enhances its Africa outreach via power lessons in capacity-building, education & healthcare. Africa beyond the Chamber Brooms in India's tech embrace. The pan-African e-Network project is an example of Indo-tech. That brings tele-education Tele-medicine to the continent. In addition, India is well known for giving scholarships to African students as well professional trainings which enable human capacity development.

Brazil: Agricultural Expertise

Brazil focuses on helping African countries improve their productivity in tropical agriculture and bio-fuels through agricultural cooperation.

Large-scale farming projects run South American style where Brazilian companies are involved introducing modern and sustainable practices. With more than 50 percent of his lands in Mali, he produces crops under a joint venture with Africa Agriculture Development and agricultural investment company incorporated there. And Brazilian research institutions work together to develop varieties adapted to local conditions such as these on the African continent. Not only do these projects improve food security and drive economic development, but they also place Brazil as a responsible partner in Africa agricultural growth - binding the two regions ever closer.

Trading proxies: State-owned Enterprise

BRICS countries often use state-owned enterprises as trading proxies in Africa. These companies have government backing and can take on large-scale projects. They often operate in strategic sectors like energy, mining, and telecommunications. China National Petroleum Corporation (CNPC) and China State Construction Engineering Corporation (CSCEC) are major players in African oil and infrastructure projects. Oil and Natural Gas Corporation (ONGC) Videsh Limited has investments in oil and gas fields across Africa. Rosatom, the state nuclear energy corporation, is involved in nuclear power plant projects in several African countries.

4. Descriptive analysis

The dataset was extracted from UN Comtrade with several 47 features and 90 rows initially; after preprocessing of the data, the dataset was able to be lowered to several 8 features and separated by countries for the analysis. The features remaining were considered due to their significance in description of the data and numerical value, duplicates were removed, and missing values filled in.

The data set contains the following features:

- Period: Year in which the trade amount was reported.
- Reporter: Country that reported the trade amount.
- Partner1: Country or location reported the trade amount was exported to.
- CmdCode: code used by UN Comtrade to identify commodities.
- Trade Value (\$): Gold trade value in USD.
- NetWgt: Net weight of the gold trade.
- QtyUnit: Unit of measurement for the trade set in KG.
- AltQty: Alternative Quantity of the gold trade.

Table. 1 Statistical Summary of The Overall Dataset

| | <i>Trade value (\$)</i> | <i>NetWgt</i> | <i>AltQty (KG)</i> |
|--------------------------|-------------------------|---------------|--------------------|
| Mean | 413739291 | 8197.73085 | 139.363353 |
| Standard Error | 63930098.4 | 985.1067 | 23.0651466 |
| Median | 17685354.3 | 4715.22 | 2 |
| Mode | 1727405589 | 4715.22 | 511.681 |
| Standard Deviation | 603115343 | 9293.47802 | 217.596158 |
| Sample Variance | 3.64E+17 | 86368733.6 | 47348.0879 |
| Kurtosis | 0.08422325 | 0.38012292 | -0.69879148 |
| Skewness | 1.24180046 | 1.21137784 | 1.11192899 |
| Range | 1727405538 | 32569.5 | 511.681 |
| Minimum | 50.55 | 1 | 0 |
| Maximum | 1727405589 | 32570.5 | 511.681 |
| Sum | 3.6823E+10 | 729598.046 | 12403.3384 |
| Count | 89 | 89 | 89 |
| Largest (1) | 1727405589 | 32570.5 | 511.681 |
| Smallest (1) | 50.55 | 1 | 0 |
| Confidence Level (95.0%) | 127047637 | 1957.69256 | 45.8371321 |

The data distribution was separated into the two analyzed countries, Togo and Zimbabwe. The figure below shows the data distribution for Togo, which was divided in three sections on intervals of 15,000,000 each, this graph shows that the entries are heavily skewed to the right, meaning that most of the entries for the trade value of the gold enters in the first category of the Histogram.

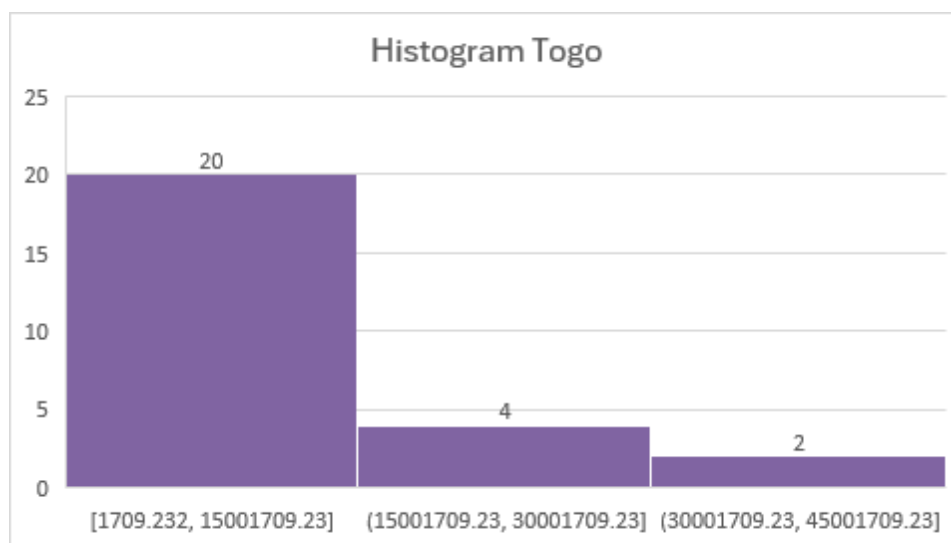


Figure 1 Data distribution for Togo

For Zimbabwe, the distribution was performed in four sections with intervals of 500,000,000. This graph also showed skewing to the right side, with most of the entries being in the first category.

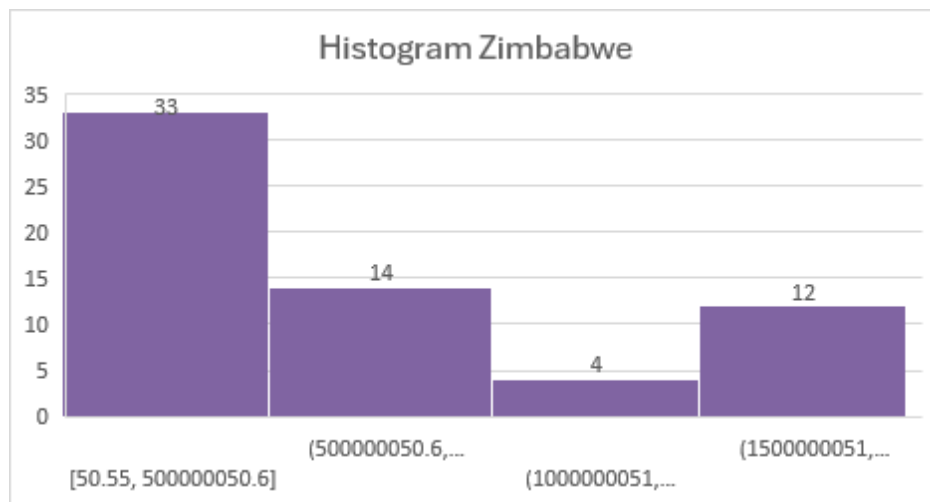


Figure 2 Data distribution for Zimbabwe

The overall trend in trade value, as shown in the graph below, is positive, meaning that this value has been going up for the two countries in question in the past few years.

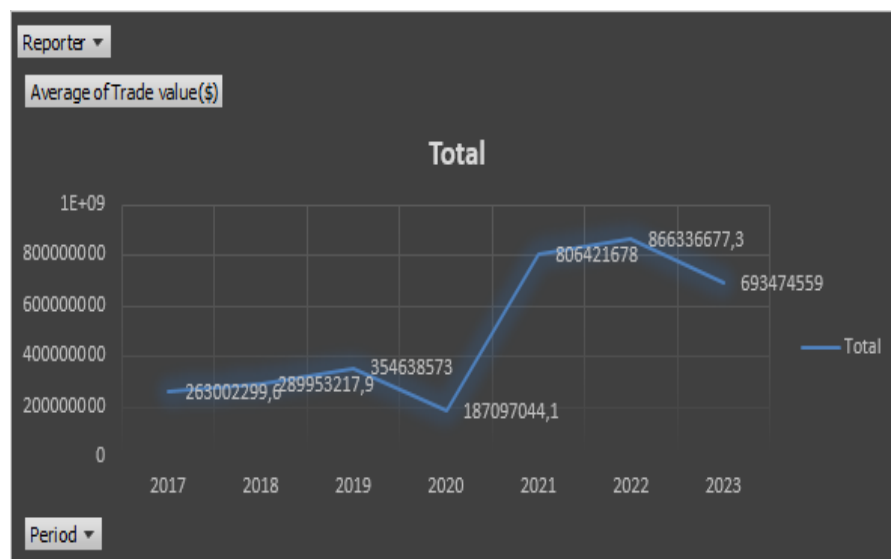


Figure 3 Overall Trade Value trend

On the other hand, the total amount of NetWgt shows a downwards trend in the past few years. From an economics perspective this makes sense since the more scarce a commodity is, the more it will tend to be more expensive. High demand and low supply would cause such behavior to affect the trade value.

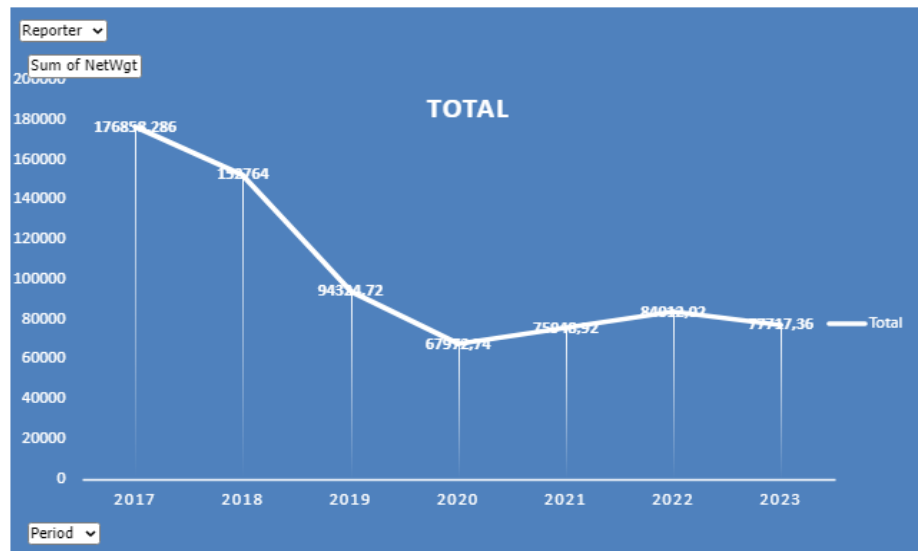


Figure 4 Overall Netweight trend

With a dispersion graph the relationship between net weight and trade value was observed. The correlation coefficient was 0.65 meaning that there is a positive correlation between the two variables, even though some entries exist where the net weight was not as high as the trade value.

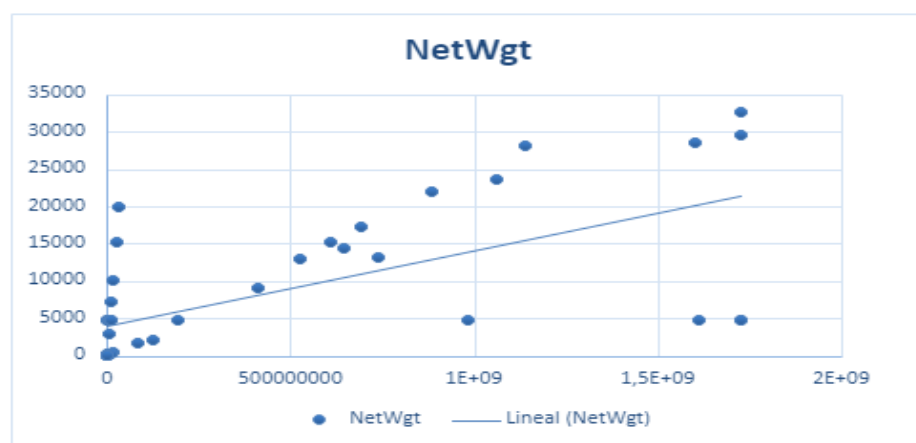


Figure 5 Correlation Netwgt and Trade Value(\$)

The graph below shows the sum of all the trade value in the dataset divided by different countries and alliances for both countries. As shown below the country with the most exports is the United Arab Emirates, followed by South Africa in second place.

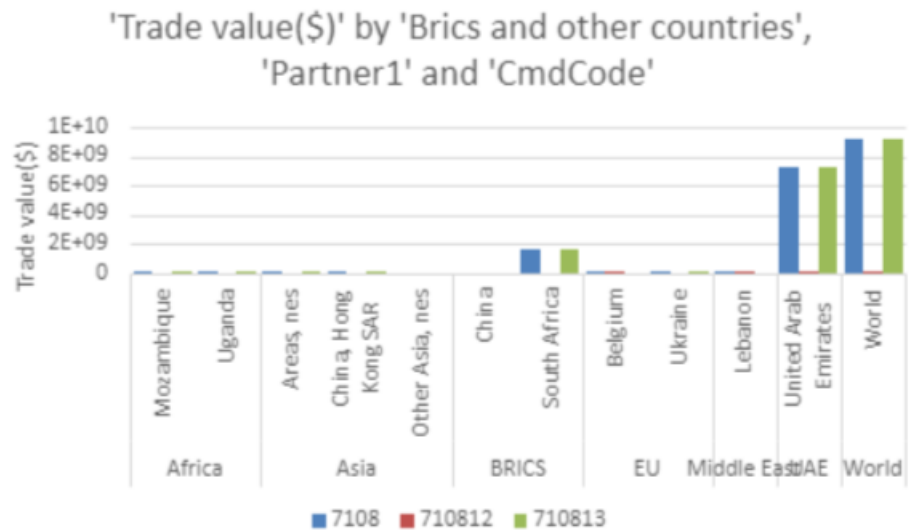


Figure 6 Tradevalue by brics and other countries

Togo

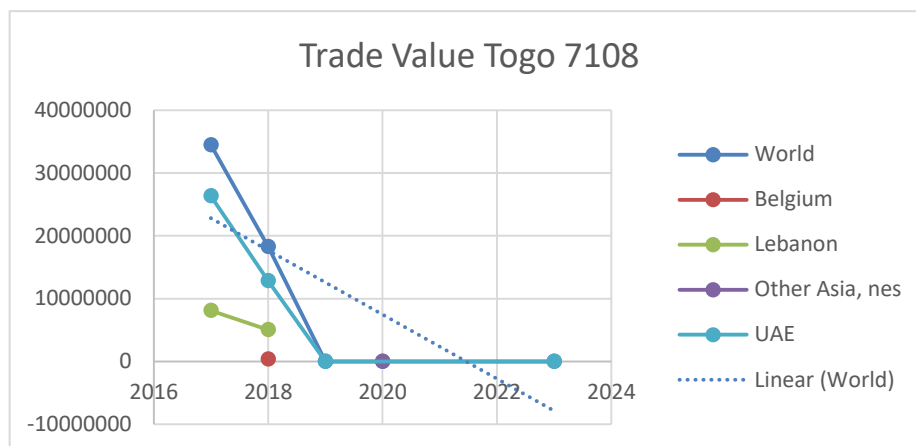


Figure 7 Trade Value Togo 7108

- In 2017, large amounts of gold were exported from Togo to Belgium and the United Arab Emirates.
- In 2018 Gold mining in Burkine Faso and Nigeria fell into the hands of armed groups, which affected the situation in the region.
- In 2019 this year, news emerged that large amounts of gold were smuggled from Africa to the United Arab Emirates. It turned out that gold trade rates in the region did not reflect reality and the figures were not correct.
- In 2020, Togo's gold trade was affected by the covid 19 pandemic, and during this period, gold trade was negatively affected due to trade and logistics problems.
- In 2021, Even though Togo started to recover economically, gold trade activities continued to remain negative due to the global economic crisis and the security problem in the region.
- In 2022, This year, Togo's gold trade was largely driven by exports to the United Arab Emirates.
- In 2023, Togo's gold trade continues as an important economic activity in 2023. Togo needs regional cooperation to increase its trade volume.

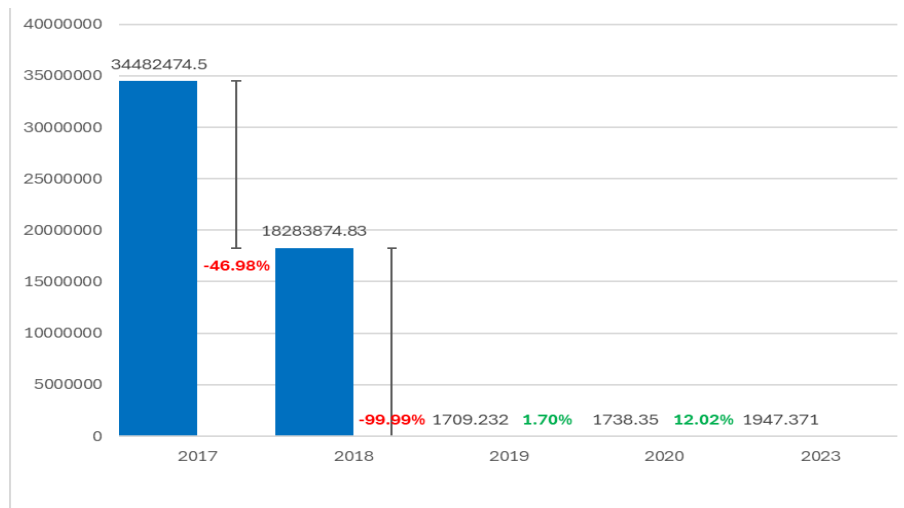


Figure 8 Trade Value Togo from 2017 to 2023

Zimbabwe

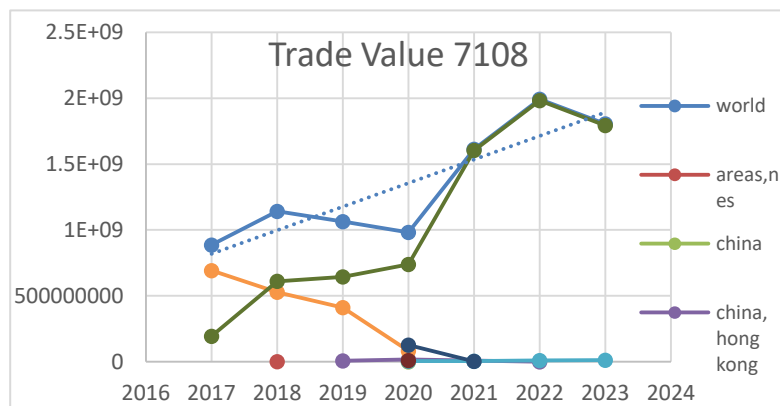


Figure 9 Trade Value Zimbabwe 7108

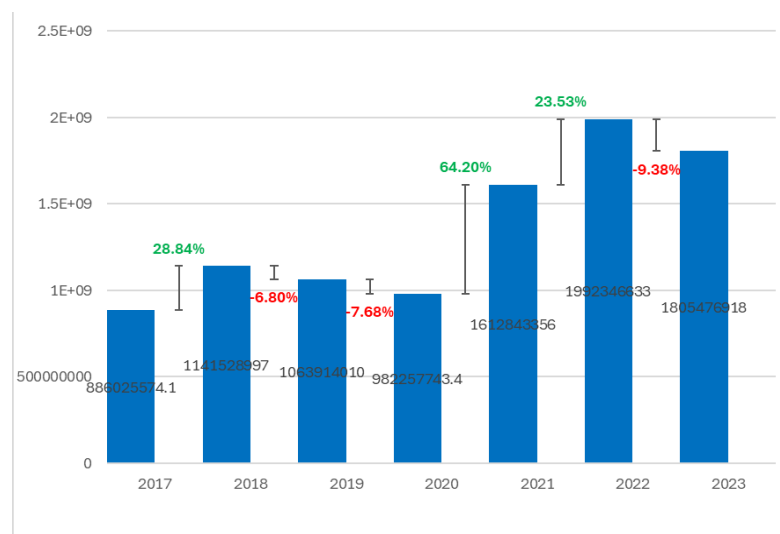


Figure 10 Trade Value Zimbabwe from 2017 to 2023

With the gold data from 2017 -2023 we have we Can observe that Zimbabwe exported their gold only to two countries South Africa and China Respectively in the BRICS Nations.

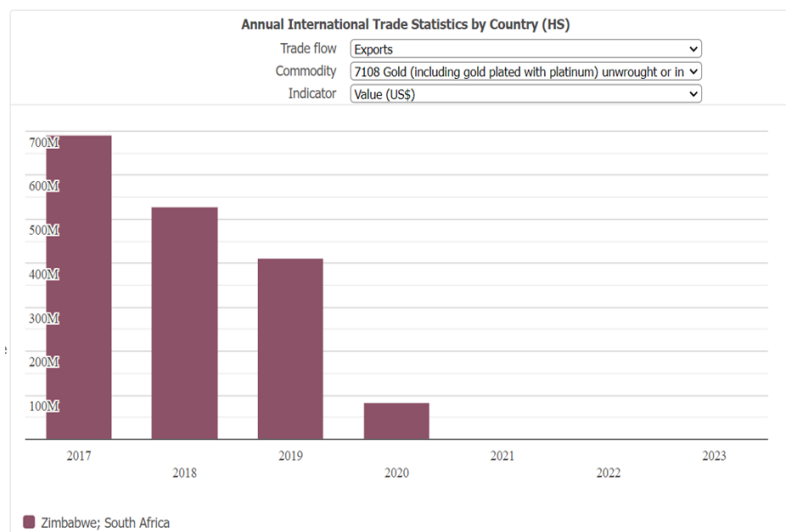


Figure 11 Gold Trade between Zimbabwe and South Africa

Graph showing the gold trade between Zimbabwe – South Africa Between (2017-2023). The Zimbabwe exports its gold to only two of the BRICS nations China and South Africa, and the South Africa is its long-term Major partner than China. As it exports its most of the gold to the South Africa than China. It exports a very little quantity to China Compared to South Africa. During the period 2017-2023, the exports to the South Africa was done in 2017, 2018, 2019, 2020 only, and to the China Only in 2020 it made exports.

In this trade we clearly observed that Zimbabwe exports its major exports to South Africa. As the South Africa and Zimbabwe are the members of the Southern Africa Development Community (SADC) and these both countries have a Bilateral Trade Agreement made in 1964, which now resembles the trade relationship between both the countries. From then Zimbabwe exporting 75% of its total exports to South Africa, with the major export as gold(\$869M) and followed by other, the South Africa is its major Destination with (1.31B) and then followed by Mozambique, UAE, China and Others.

Until 2017 the trade between the South Africa and the Zimbabwe was Good. But in 2017, November South Africa officially announced to terminate the 1964 bilateral Trade agreement, in 2012 the Zimbabwe increased the surtaxes on certain imports from the South Africa as the trade is being done under the bilateral trade agreement. This was because the Zimbabwe is losing its income by the bilateral agreement, due to no charges are applicable on certain imports from South Africa with the bilateral agreement, so they suspended the custom duty preferences under the bilateral agreement which tends to termination of Bilateral Trade Agreement. Finally in 2018 the South Africa terminated the bilateral trade agreement. After this Agreement termination these two countries do their trade under the SADC FTA.

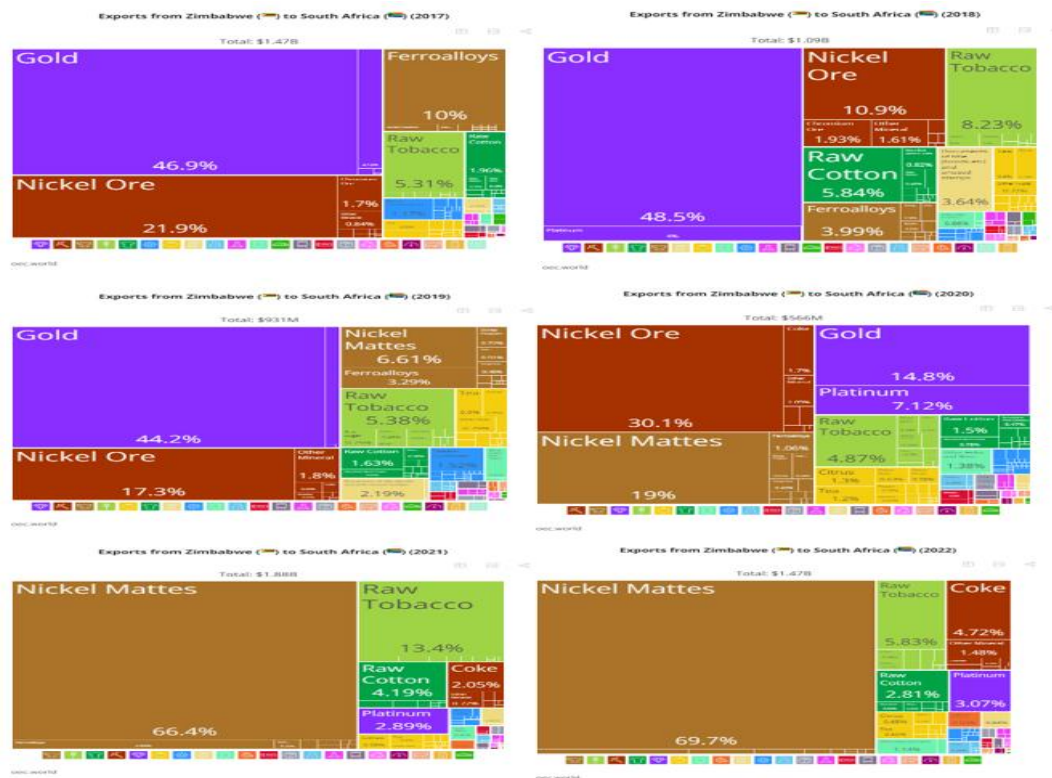


Figure 12 Exports from Zimbabwe to South Africa from 2017 to 2023

By observing the above graphs, we can observe that till 2016 the percentage of gold exports made to South Africa by Zimbabwe are gradually increased by every year, this was done under the Bilateral trade Agreement. After the official announcement of the termination of the 1964 Bilateral Trade Agreement in 2017, there is decrease of the gold exports by 12.7% and in 2018 it was reportedly increased 2% and after the termination of the Bilateral Trade Agreement in 2018 November we can clearly observe that the gold exports were gradually decreased every year.

In 2020 the Zimbabwe's gold decreases to USD 980M from USD 1.6B in 2019, this was due to the various reasons such as the COVID 19 impact and lack of the advanced machinery to mine the gold, power shortages and smuggling of the gold in 2020 impacts the Zimbabwe's gold trade.

Before 2106 in the Zimbabwe their mining plays a key role in their Economy, in between 2016-2020, there are several conflicts raised which affects the economy of the country, due to the season mining companies or small scale mining companies collided with the large scale companies leads to the attack by the artisanal mining companies caused hundreds of casualties, and their mining was also damaged by the systematic challenges such as the corruption, lack of investment and inefficient operations. Due to the high-level corruption in the government and weak laws which help the smugglers and others to do smuggle the gold and illegal activities. More particularly in their mining sector the gold mining became the focus point of the political and economic challenges, in between 2016- 2020, in this period the Zimbabwe also faces the increasing economic instability due to its poor governance and weak laws.

During this economic crisis they also faced a serious problem of having a foreign currency shortage which in result affects the mining sector that they cannot offer a good price to the producers which leads to the illegal mining activities. To regulate this mining Activities the government enforced the police raids and military checking in the mining, during this the clashes by the small-scale mining companies with the large-scale companies, increases violence, and in this period the smuggled from the country to outside is valued more than the USD 1.5B. So, the government focuses on reducing the violence and illegal activities and made the artisanal mining companies as legal, and the government made the rules that all the gold from the mining companies is to be bought by the reserve bank to give the good price. But the Smuggling of the gold has not stopped as they are getting good amount of money in the international markets this smuggled gold was sold to Dubai, South Africa.

During the Covid 19 in 2020 the government resume the parliament to do in depth enquiry in the illegal gold mining as the politicians involve in this and after they made several rules that the mining companies can legally sell the gold to various countries internationally to get gold prices.

In addition to that the Zimbabwe changes its strategies to export its gold to countries like Dubai and other countries in the world who offer best prices. As compared to the traditional partners like south Africa with this they are getting more revenue, but the smuggled gold illegally is exported to the South Africa due the high offerings in the international Black markets. The Zimbabwe government also made several reforms and polices to reduce the smuggling by making their reserve bank to put effort to get the competitive rates and payment in USD. Along with this the sole buyer of gold in the Zimbabwe FRP (Fidelity Printers and Refiners), allowed the authorities i.e., the Large- Scale production companies to directly export a part of the gold to others by changing the traditional policies so that they can improve their Economies. And, Zimbabwe has done several efforts to do not rely on South Africa and to directly export their gold internationally bey increasing their domestic production and developing the gold centres etc. Furthermore, with these ongoing factors and challenges to enhance their economy the Zimbabwe gradually decreases its exports to South Africa in the future years.

The Gold exports by Zimbabwe to China:

The Look East Policy (LEP) of Zimbabwe which started in the first years of 2000 was a strategic step to make a stable economy by making relationships with Western countries specially China. This strategy was designed to fill the lack of security and stability in economy of Zimbabwe from this way. In this part effect of LEP on Zimbabwe-China relationship is explored. The objective of Zimbabwe's Look East Policy (LEP) was to build strong relationships with Asian countries, particularly China, while maintaining ties with other Western nations. Despite its strategic intentions, the result of this action was more opportunities for investments from elites of Zimbabwe and less opportunity for normal population of Zimbabwe. Then we explored substantial consequences of the COVID-19 pandemic on trade patterns, GDP, and inflation between Zimbabwe and China, highlighting the differences in their economic profiles and long-standing trade links.

The study uses quantitative data from official trade statistics and foreign databases from January 2017 to December 2021. It is showing the more importance on short fall China's ongoing trade and Zimbabwe's growing dependencies on Chinese goods. The covid 19 displayed that Zimbabwe has imbalance economic structures, as it must grow their economy in future it must have more partners and best domestic industry. China should find out the benefits of a balanced trade relationship by helping Zimbabwe build its capacity, transfer technology, and attract investment. This study used data of trade patterns and important economic indicators between Zimbabwe and China during different stages of the pandemic and the GDP growth rates and inflation rates of Zimbabwe and China during this time and used international trades.

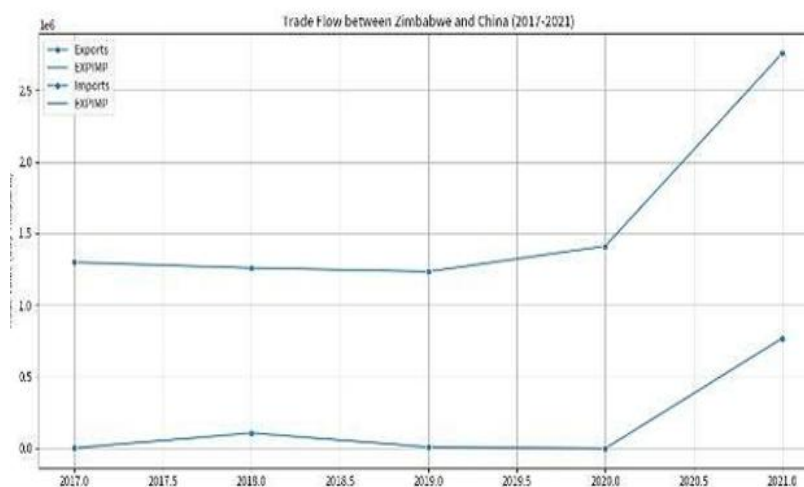


Figure 13 Trade Flow between Zimbabwe and China

During the period 2017-2021, the Zimbabwe's trade with China has decreased, but the imports from China have increased very highly than exports to China. In 2017, the Zimbabwe exported its goods to China valued only USD 2.8M, but in contrast it imported the good from China valued about USD 1.3 B which shows a huge difference. And by each from then the increasing difference between the imports and exports has been continued with approximately USD 2.76B imports compared with USD 786.2M exports by 2021. Also there has been a slight increase in the exports to China but the imports were still dominated. With this continuous ongoing trade imbalance which shows the China goods dependency by Zimbabwe.

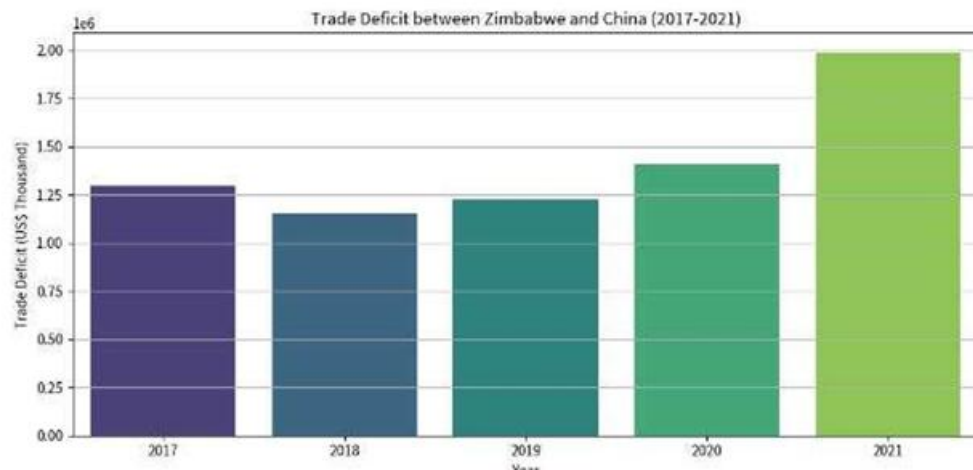


Figure 14 Trade Deficit between Zimbabwe and China

At the end we have to know that the measure of export of checked cmd codes from china are not visible in compare within South Africa.

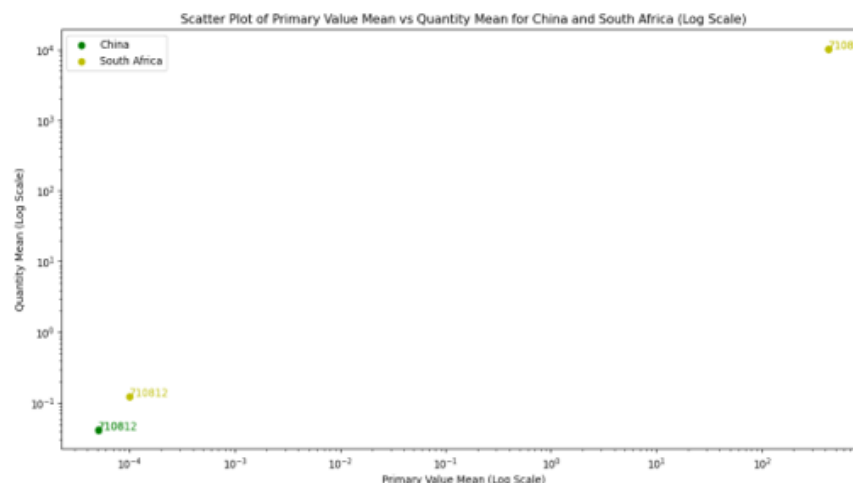


Figure 15 Primary Value Mean vs Quantity Mean for China and South Africa

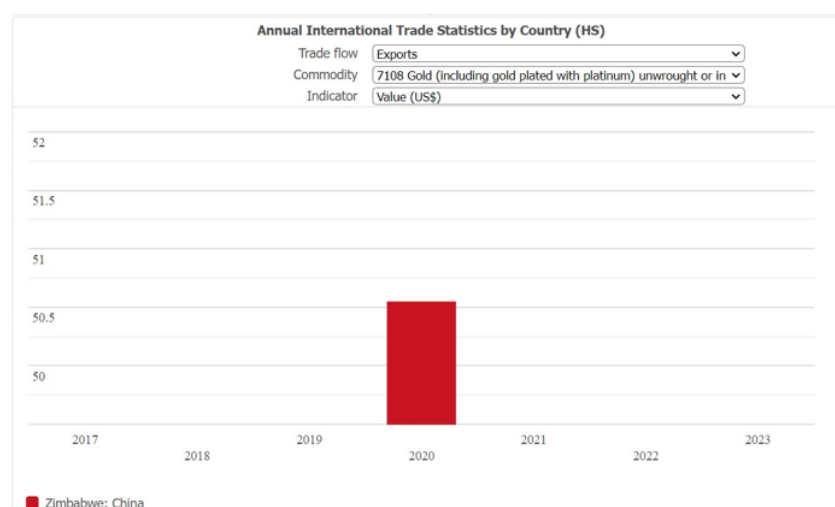


Figure 16 International Trade by country

From the above graph we can clearly observe that the gold exported by Zimbabwe to China is only done in 2020 having a value of USD 50.50M. As the Zimbabwe is maintaining its trade relations with China it is exporting various other commodities in a large amount, but not the gold, during this period. During this period 2017- 2023, due to the local politics, smuggling etc., and COVID 19 impact as stated in the above so, they did not exported gold to China due the Zimbabwe's strategic economic decisions.

6. Risks and limitations:

Trading gold involves various risks and limitations like economic factors and Political instability. It is important to get to know the advantages and disadvantages of investing in gold. Gold can experience many fluctuations in price where it can affect the stock valuations. In recent years, the U.S government and myriad organizations have issued reports stating the risks that are associated with the gold industry in sub- Saharan Africa.

Large amount of gold had exported to the countries like Dubai, United Arab Emirates (UAE) from the Central and East Africa which resulted in money laundering, smuggling. The factors that allow for smuggling and trade of conflict and high-risk gold are weak customs controls, inadequate oversight of refiners, and continued allowance of large cash transaction.

Geopolitical tensions and conflicts have a major impact on the prices of gold. Political instability, wars or even geopolitical shifts can increase the demand for gold by increasing its price. This resolution of conflicts may lead to a decrease in demand and fluctuations in the Price.

Political Instability:

Togo has faced many problems like political instability, government issues and leadership problems which lead to increased risks in the gold market. It may discourage foreign investments and create obstacles in regulatory structures. This may result in the change in different regulations and policies which impact the legal and financial aspects of the gold industry.

Togo with Ghana, Benin and Burkina Faso as share its border and highly developed its economy in trading logistics and have seen decline in the economy of Togo by the Covid-19 pandemic which reduced four – fifths of Togo's growth in 2020. There was a continuous reduction of production and sales in manufacturing, retail trade and in other sectors. Many of the businesses shut down and entire economy of the Togo shut down. The main obstacles of private sector development are high taxation and facing difficulties in accessing finances. Togo has informal mining sector, where the gold is mined and traded outside which is due to lack of oversight. Weak government rules and corruption can make it hard to look and manage the flow of gold and the money made from the mining activities. Corruption and immunity are the other risks associated with trading gold. With this corruption, Togo gets a phenomenal loss annual loss of 25% of GDP. Higher officials tried to prevent corruption, but it remained the same. The property rights and judicial independence are not constant in Togo and the Land disputes were the major challenge in the country.

Togo remained as a poor and was at a risk state under OECD category. It had control over the area and population by using forces. Frequent changes in the mining laws, political field in unstable which affect the value of the local currency and it will increase the risks in currency exchange and gaining of profits.

Limitations includes maintaining poor infrastructure leads in delaying the trading of gold from mines to markets, Investors will have less interest to fund the projects which lead to trade restrictions. Continuous strikes, protests, and changes in governmental shutdowns will delay the mining and trading operations.

“Zimbabwe is open for business” was the investment message since Emmerson Mnangagwa came into power and his administration was attracting more foreign investments into the country. The crucial relationship between business and politics has failed to generate benefits. The economy and political environment became worse and failed to convince the international community and local investors. This is due to a lack of confidence in the market, currency exchange rates are higher, and business viability has remained low. The regulations implemented by the government will influence the business operations in positive and negative ways and cause the business to suffer losses.

The political instability in Zimbabwe has impacted the investments of the foreign countries to the country. Internal political instability along with election results, protests have restricted the country's value as an investment destination. The government was involved in all sectors including the transport services leads to social instability which affects the business operations. The looting, burning and destruction of business properties had caused a loss of \$500 million. Other factors like increasing or decreasing the rate of taxes directly impact the business. Increasing tax rates impact the cost of living for the citizens in the country, which in turn impacts on aggregate demand for the supply of goods into the market affecting the business operations.

7. Conclusion

Gold trade in Togo and Zimbabwe has both opportunities and significant challenges in political instability, Changes in the government policies, and operational risks. There were some common things that investors and traders should focus on. Togo has many mineral resources while the gold sector has ability to increase its trade which leads to investments and get high returns. To reduce the risks like political instability, corruption, improper infrastructure engages with the local stakeholders, investments, and implement strong strategies in risk management. Zimbabwe has huge history in gold trading. The country was facing severe economic challenges, instability in currency exchange, restrictions in economic policies, political instability. To overcome the risks, Investors should take certain measures to eradicate problems. With proper methods, it was easy to deal with complexities and achieve positive results in the marketplace.

8. References

- All That Glitters is Not Gold: Turmoil in Zimbabwe's Mining Sector | Crisis Group (no date). Available at: <https://www.crisisgroup.org/africa/southern-africa/zimbabwe/294-all-glitters-not-gold-turmoil-zimbabwes-mining-sector>
- Ecosystem - Trophic Levels, Food Chains, Interactions | Britannica (2024). Available at: <https://www.britannica.com/science/coast>
- Fundira, T. (no date) 'South Africa's trade with Zimbabwe'.
- Hazvinei, C. (no date) 'China-Zimbabwe Trade Relations in the 21st Century: An Analysis of the Trends, Patterns and Prospects'.
- Manhire, N.L. (no date) 'A Comparative Study Of The Impact Of Covid 19 On Trade Patterns, GDP, And Inflation Between Zimbabwe And China'.
- Markowitz, M. (no date) 'Coinage of Aksum: An African Kingdom'. Available at: https://www.academia.edu/20299633/Coinage_of_Aksum_An_African_Kingdom (Accessed: 22 July 2024).
- Nuggets, R.G. (2015) 'Gold Production Declining in South Africa', *RareGoldNuggets.com*, 23 October. Available at: <https://raregoldnuggets.com/?p=1809>
- Ojakorotu, V. and Kamidza, R. (2018) 'Look East Policy: The Case of Zimbabwe-China Political and Economic Relations since 2000', *India Quarterly*, 74(1), pp. 17–41. Available at: <https://doi.org/10.1177/0974928417749642>.
- South Africa (ZAF) and Zimbabwe (ZWE) Trade (no date) *The Observatory of Economic Complexity*. Available at: <https://oec.world/en/profile/bilateral-country/zaf/partner/zwe>
- Termination of the South Africa-Zimbabwe bilateral trade agreement: What does it mean for South Africa-Zimbabwe trade? - tralac trade law centre (no date). Available at: <https://www.tralac.org/blog/article/13711-termination-of-the-south-africa-zimbabwe-bilateral-trade-agreement-what-does-it-mean-for-south-africa-zimbabwe-trade.html>
- Zimbabwe (ZWE) and Togo (TGO) Trade (no date) *The Observatory of Economic Complexity*. Available at: <https://oec.world/en/profile/bilateral-country/zwe/partner/tgo>
- 'Zimbabwe's gold production up as new mines begin production' (2021), 5 December. Available at: <https://theexchange.africa/industry-and-trade/zimbabwes-gold-production-up-as-new-mines-begin-production/>

9. Appendix

```
1 import pandas as pd
2
3 df = pd.read_excel("C:/Users/migue/Downloads/Partners all 2023-2017 XL.xlsx")
4
5 for i in df.index:
6     if df.loc[i, "ReporterDesc"] != "Zimbabwe":
7         df.drop(i, inplace=True)
8
9 c_stay = ['RefYear', 'ReporterDesc', 'PartnerDesc', 'CmdCode', 'CmdDesc', 'QtyUnitAbbr', 'Qty', 'PrimaryValue']
10
11 df = df.fillna(method='ffill').fillna(method='bfill')
12 df = df.drop_duplicates()
13 df = df[c_stay]
14
15 df.to_csv("new_data_zimbabwe.csv", sep=',', index = False, encoding='utf-8')
```