



# **Extractive Commodity Price Risks and Effects given the Covid-19 Pandemic**

**Semboja Haji Hatibu Haji<sup>1\*</sup>**

<sup>1</sup>*Department of Economics, Zanzibar University, P.O.Box 2440, Zanzibar, Tanzania.*

### **Author's contribution**

*The sole author designed, analyzed, interpreted and prepared the manuscript.*

### **Article Information**

#### Editor(s):

- (1) Prof. Yong X. Gan, California State Polytechnic University, USA.
- (2) Prof. Oscar Jaime Restrepo Baena, Universidad Nacional de Colombia, Colombia.

#### Reviewers:

- (1) Cheng Chung Wu, Jiaying Nanhu University, China.
- (2) Maria Daniela Bondoc, University of Pitesti, Romania.
- (3) Mukesh V. Chaudhary, Lovely Professional University, India.

Complete Peer review History: <http://www.sdiarticle4.com/review-history/69903>

**Original Research Article**

**Received 10 April 2021**  
**Accepted 16 June 2021**  
**Published 21 June 2021**

## **ABSTRACT**

Sudden outbreak of the Coronavirus Disease (COVID-19) in December 2019 has brought global and domestic disturbances in the commodity market systems and processes. This has mostly affected the demand as well as the supply of the extractive sector commodities. The oil and gas markets have been severely complicated due to outrageous collapse in the demand majorly due to global travel restrictions which has also caused sharp down-swings and slows up-swings in global and national oil prices. The prices of both precious and industrial metals have also been negatively affected, although the price movement has not been more dramatic than that of oil prices. The ultimate short, medium and long term effects of the COVID-19 pandemic will greatly depend on global and national systems, technological developments, resources, infrastructure capacities and duration of its outspread, but it is expected to have long-lasting implications. The paper assesses levels of risks for the prices of extractive products given COVID-19 pandemic using the HakiRasilimali field research survey 2020.

The levels of risks on many commodity market prices in the extractive sector are high. There are various global and domestic factors contributing to current price volatility, mechanisms and effects on socio-economic factors given Covid-19. The global factor dominated by the plummeting of oil and gas prices was a direct consequence of an oversupply of fuel and a declining demand for fuel amidst travel restrictions and economic lockdowns. Lower and increased risk oil prices mean less

\*Corresponding author: Email: [haji@semboja.com](mailto:haji@semboja.com);

investments, exploration; drilling and process activities because most of the new oil driving the economic activities are unconventional and have higher costs per barrel than the conventional source of oil. The levels of risks on the price of many mineral commodity prices have been highly affected by the Covid-19 pandemic. The internal firm factors include weak corporate financial strength and poor price-risk management strategies, as well as dynamic technological mining practices and methods at the operation levels.

All socio-economic entities have to support functioning of perfect competitive extractive product and pricing systems during and after the Covid-19 pandemic. All global, regional and nation oil extractive sector organisations, alliances and firms work jointly and cooperatively to ensure stable market supplies and demand given efficient technologies and prices.

*Keywords: Covid-19; risks; e extractive industries; Tanzania.*

## **1. INTRODUCTION**

### **1.1 Background**

The outbreak of COVID-19 pandemic as a public health risk and its negative effects and changes on extractive sector material markets, prices, quantities and investments in 2020 came to complicate the already disturbed widespread declines in global extractive sector commodity systems. Changing producer and consumer behaviours of materials could cause structural shifts in economic systems, work patterns, reducing mobility, travels, actions and demands for extractive products such as fuel and diamond. An unwinding of complex global value chains may occur, which could reduce commodity productions and demands [1]. The short, medium and long term effects of the Covid-19 pandemic will depend on its connections, severity and duration, but it is likely to have lasting public health risks and implications just like other communicable diseases [2]. Over the short-term, in addition to weaker production, demand, disruptions to supply chains could cause dislocations in commodity markets, with investments and utilization of resources being the major risks.

The Covid-19 pandemic is present now 2021 and in the future continue evolving the economic and social short, medium and long term effects of the public health crisis as being clearly negative, detrimental and asymmetric, with all countries, socio-economic sectors, actors and activities being hardest hit by the pandemic. Like other nations, the Tanzania's socio-economic sectors, activities and actors have not been unique amid the Covid-19 pandemic in 2020. Since the first cases were announced in March 2020, a few thousand Covid-19 cases have been confirmed with about few hundred deaths (real-time data). Both urban and rural areas had been reporting

on increasing Covid-19 cases. This comes with a subsequent negative impact on health, social and rural livelihoods. Under the current circumstances, the business environment such as the extractive sector- comprised of the mining, oil and natural gas in Tanzania are at risk mostly due to globally imposed lockdowns and travel bans. The global economy is contracting, markets and storage facilities are being overwhelmed and the stock markets are crushing.

With no lockdowns being formally imposed by the Tanzanian government in year 2020, the formal extractive sector started to observe temporary layoff cases and suspension of extraction activities, something that had disrupted the lives of hundreds of workers in the country. There are number of factors that exposed Tanzania to great socio-economic risks; if Covid-19 is not well managed. These include, create uncertain investment ground; scare away tourists; negative socio-economic effects and implications of Covid-19 and fear of overwhelmed public health systems.

### **1.2 Paper Objectives**

The objective of the paper is to present preliminary assessment results done in 2020 of the level of risk of Covid-19 on the price of extractive materials [3]. The initial assessment was done by HakiRasilimali (HR) in 2020 with the overall objective of conducting a situational analysis of the extractive industry sector amid COVID-19 in Tanzania. HakiRasilimali, (HR), is a platform of Civil Society Organizations (CSOs), working on strategic issues around minerals, oil and gas extraction in Tanzania. The HR created multi-stakeholder coordination and learning platform on the *Impact of Covid-19 on the Extractive Industry in Tanzania*.

### 1.3 Strategic Study Methodology and Approaches

In conducting a study on the extractive industry sector amid COVID-19 in Tanzania, the HakiRasilimali, (HR) research used strategic methodologies, approaches and methods [3]. These included [4] the HR consultative workshop held in Dar es Salaam, [2] intensive desk studies or/and literature review, [5] conducting mini-field research surveys, key stakeholder consultations, covert and overt observations; [6] data management and policy analysis, [7] draft report writings, internal and external consultations, [8] final report and paper writings. As the pandemic spread in different parts of the world in 2020; Tanzanian authorities were reluctant to release national COVID-19 data and information needed by the World Health Organization (WHO) for planning and implementation of public health measures to break the chain of transmission of the deadly virus.

## 2. RISK CONCEPTUAL FRAMEWORK

Covid-19 risks are defined as a public health threats or possibilities of the pandemic (as an event) will adversely affect human beings and their socio-economic entities, sectors and actors in terms of their ability to achieve their desired objectives [9,2]. These Covid-19 health risks are considered as public health risks anticipated through surveillance; monitoring, evaluation, controls of systems, operations and procedures, which are carried out by national public health systems, resources and infrastructural facilities [10,11,3]. The risk theory provides frameworks that can contribute to detection, analysis, management and mitigating risks, coming to grips with uncertainty, and offering ways to organize society in such a way that the unexpected and unknown can be anticipated or at least dealt with within a reasonable and ethically acceptable way [12,9].

There are views that human beings exposed to a high level of risk may experience symptoms of psychosis, anxiety, trauma, suicidal ideation, and panic during outbreaks of communicable diseases [13]. Theoretical reflection about risk gives rise to various general issues including risk information and communication in the health-care sector. Information, communications and technologies have been the major problems for all the stakeholders who wish to help in making appropriate investment, production and consumption decisions.

The viruses that cause COVID-19 have risks of infecting and affecting human resources or people of all ages, gender, races, time and nations, including all socio-economic sectors and activities [9,14]. The Covid-19 virus can attack human resources as producers or workers or and as consumers or households. That is, the Covid-19 virus can attack, interfere and affect input, transformation and output processes in all socio-economic sectors and activities [2]. For example, many extractive sector workers sleep, work, rest and share concerns with other extractive sector workers and families in their operational sites and like to meet up with nearby communities to socialize. Their risks of catching Covid-19 go up for them and other counterparts as they mix with others, unless they can keep a safe distance. That is because Covid-19 is transmitted by close contact with someone who has the virus. An active young person can have no symptoms but still be able to spread it. The virus is carried in spit droplets that are - often imperceptibly - propelled into the air when we breathe and when people talk or cough [14,15]. And they can land on the surfaces' that people touch, which is particularly important for the mining workers who work in any mining sites and operations.

The extractive sector managers, workers, operators, auxiliaries and others have risks of coming into contact with people affected with Covid-19 in highly populated areas. Their risks are higher if there are more of the viruses entering and circulating where they interact, work, rest, play, live and socialize [9]. The risk of catching Covid-19 is high for everyone who is active, the one who travels and moves around in densely populated areas. Most energetic and active young people will have mild or no symptoms given infected by Covid-19. But at times some young and physically fit people have become critically ill and died in some countries. Some who recover from even a mild bout develop longer term complications, known as long Covid-19. Even those who may have had the disease already will not necessarily be immune. So there is a risk they could still catch it, spread it, get sick and become incapacitated [10].

## 3. RESULT & DISCUSSION

### 3.1 The High Current Levels of Price Risks at the Extractive Sector Firms

Section 3 analyses current levels of risks for the price of extractive products given Covid-19

pandemic [3]. The analysis is based on the HR data and information derived from both secondary and primary data and information from other public and private scientific studies for risk exposure and risk management, particularly risk exposure to Covid-19 and primary data and information generated from field research surveys.

### 3.2 High Levels of Risks on the Prices of Extractive Products from Covid-19

Petroleum products and mineral products prices are the major and important extractive prices in global competitive commodity markets. Notable extractive sector price risks are the risks of a decline or/and variations in the values of a production values, securities or an investment portfolio excluding a downturn in the market, due to multiple factors [6]. Factors that contribute and affect commodity price risk include earnings

volatility, poor business management, financial, paper and other commodities price changes.

#### 3.2.1 High oil and gas price risks

Oil and Gas price risk is the risk that petroleum material prices may change rapidly, substantially, and unpredictably. Firms and governments bear this risk in two main ways. They could either lock-in the price of their future production or consumption now or insure against large oil price moves, or both. Fig. 1 presents perceived views on the level of the price of the extractive products. The majority, that is, about 93.4 per cent had the view that the level of risk on the price of the extractive sector is high. During the Covid-19 pandemic, all oil and gas markets across all countries have been simultaneously and negatively hit due to sudden depressed effective demand [4]. Limited global, regional and national travels led to decreases in incomes and demand for petroleum products.

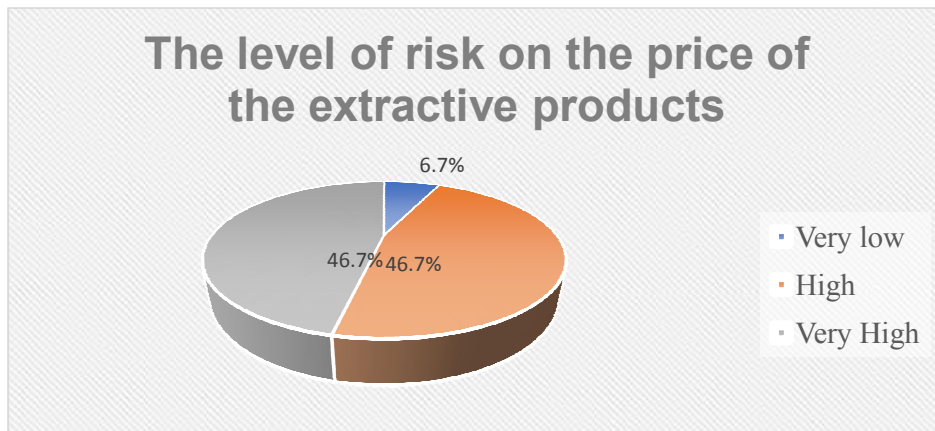


Fig. 1. The level of risk on the price of the extractive products  
Source: HR Field Work Survey 2020

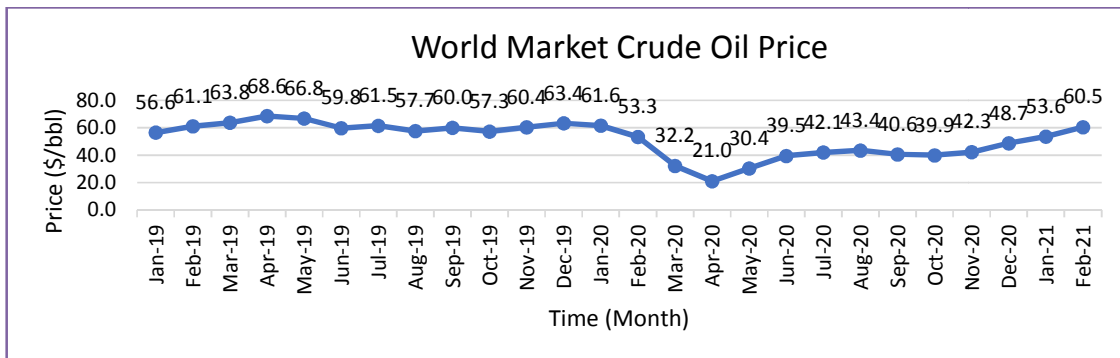
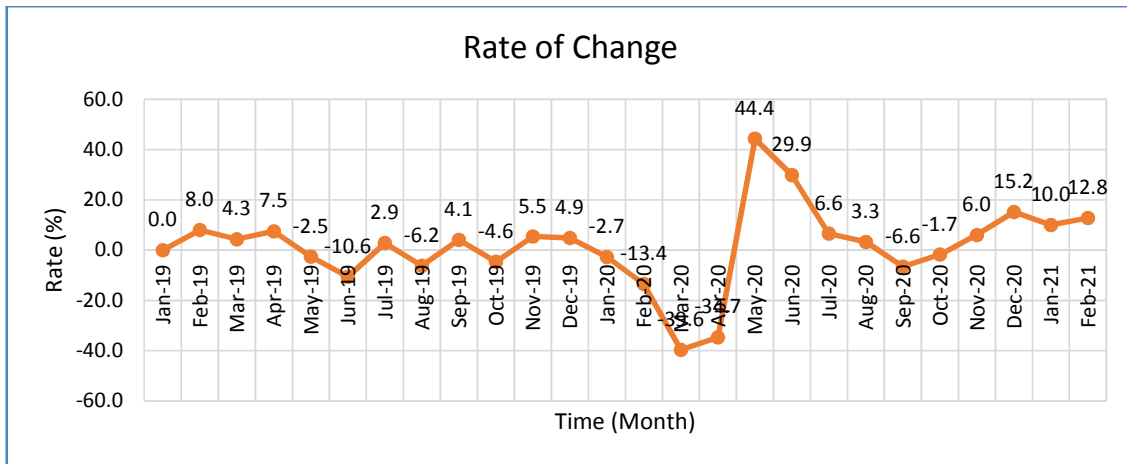


Fig. 2. Trend of world market crude oil price  
Source: World Bank, 2021



**Fig. 3. Rate of change of World Market crude oil price**  
 Source: World Bank, 2021

Fig. 2 shows the trend of the world market crude oil price in USD for the period from January 2019 to February 2021. Fig. 3 shows the rate of change of the world market crude oil price in percentages for the period from January 2019 to February 2021. Figs. 2 and 3 show the world market crude oil price patterns and changes before and after the Covid-19 pandemic.

The price of US oil has been the dominant global price and turned negative in 2020 for the first time in history (FT, 2021). That means, at that particular point in time, oil producers were paying buyers to take the commodity off their hands over fears that storage capacity could run out in May. Demand for oil has all but dried up as lockdowns across the world have kept people indoors. Prices crashed by almost 50% in 2020, from \$66 per barrel on 31<sup>st</sup> December 2019 to the current levels, primarily driven by lack of effective demand. The price of a barrel of Brent crude oil went down by 24% at \$34.36 after the price war was initiated between Saudi Arabia and Russia, two of the world's largest oil producers. The lowest oil price levels hit \$0.01 per barrel before falling to as low as negative \$40 and eventually settling at negative \$37.63, the lowest level recorded since the New York Mercantile Exchange began trading oil futures in 1983.

The US benchmark in West Texas Intermediate (WTI) in May 2020 contracts collapsed into negative territory as a consequence of the US government's refusal to regulate oil production and impose mandatory cuts, despite calls to do so during the Riyadh (Virtual), November 21th-22th 2020 G20 recent meeting that had led to

historic cuts of 9.7 million bpd by the OPEC+ alliance.

The effects of the Covid-19 pandemic to oil and gas prices in 2020 were transitory factors and a blow to the already-disturbed oil and gas market prices. The Covid-19 pandemic plummeted the weak WTI oil price which was a direct consequence of an oversupply of fuel and a declining demand for fuel amidst travel restrictions and economic lockdowns. Crude oil prices are determined by global supply and demand. Economic growth is one of the biggest factors affecting petroleum products—and therefore crude oil—demand. Growing economies increase the demand for energy in general and especially for transporting goods and materials from producers to consumers. Pure oil price risk is a category of price risk that cannot be controlled and has two outcomes: complete loss or no loss at all. There are no opportunities for gains or profits when pure risk is involved. Pure risk is generally prevalent in situations such as natural disasters, fires or death.

Lower and increasing oil price risks mean less investments, exploration; drilling and process activities because most of the new oil driving the economic activities are unconventional and have higher costs per barrel than a conventional source of oil. Between job losses and capital losses, dip in oil prices can trim the growth of the global economy. Many extractive firms in the oil and gas sectors have been left with no obvious certain sources of financing, during a period in which access to finance might determine their

survival in Tanzania. In 2021, the oil and gas sub-sector was characterized by less foreign direct investments, no much emphasis from both governments and non-government agencies on caring and promoting the development of oil and natural gas industry were recorded. This was understandable since Tanzania is a small and an open economy, operating as a net oil-importer and a price-taker.

At the global level, the extractive sector is dynamic. Since the extractive sector is owned, managed and operated by intelligent people, innovative and proactive; these socio-economic entities will come with different plausible solutions given the Covid-19 pandemic. This paper notes that almost all commodity prices recovered in the third quarter of 2020 following steep declines earlier in the year due to the COVID-19 pandemic. Crude oil prices have doubled since their April low, supported by sharp oil supply cuts by OPEC+, but prices remain one-third lower than their pre-pandemic levels [13].

### 3.2.2 Higher risk levels for mineral materials prices

Mineral material price risk is the risk of decline in the value of mineral production values, or investment portfolios excluding a downturn in the market, due to multiple socio-economic factors [8]. The economic fallout from the COVID-19 pandemic has caused a dramatic drop in the velocity of money in the world economy, resulting in a dollar credit crunch that crashed the market and was essentially a margin call on the U.S. dollar. Mineral commodity prices are subject to volatility over both short and longer run – driving and fluctuating operating margins for extractive companies over time. Such market dynamics influence the extractive sector operating systems and decisions depending on the interplay of company-specific (internal) and mineral market factors (external) [8]. Company specific factors include corporate systems, financial resource capacities and price-risk management strategies, as well as extractive sector practices and methods at the operational level. The critical mineral market factors are costs of explorations, extractions, processing, beneficiation, transporting, marketing and distribution.

Tanzania has gold, industrial, construction, gemstone, base metals and other mineral materials entering global mineral material systems, markets and is a price taker. The mineral material price risk is the risk of volatility

and decline in the value of a mineral production values, or an investment portfolio excluding a downturn in the market, due to multiple factors [6].

Fig. 2 suggests that the consulted stakeholders had the views that the levels of risks on the prices of the mineral material prices were highly affected by the Covid-19 pandemic. It is known that the global mineral material prices are subject to systematic and sudden volatilities over both the short and longer run – driving and fluctuating operating margins for mining companies over time. Such market dynamics influence mine operating investment decisions depending on the interplay of company-specific and mineral market factors [6].

The pressure on the global growth between 2015 and 2020 has also been driving some uncertainty with material pricing systems. The current 2019-2021 presence and impacts of the COVID-19 outbreak have had an effect on both global growth and all material pricing systems. Fears of reduced supplies of key mineral materials in 2021 were growing due to measures to contain the virus at key mine operations across the globe [8]. Several of the world's biggest mining groups have announced delays to investments, production and development projects because of travel and other restrictions imposed in response to the global pandemic.

Further delays to mineral production around the world should provide some support to commodity prices, choking off some of that excess supply seen reflected in exchange inventories [8]. With the number of operations announcing restrictions to production increasing, the risk to supplies for several key commodities will ratchet up. Supply developments aside, the main risk for mineral materials is lack of investor confidences. Until we see an end to panic selling in these markets, it is hard to build a strong case for mineral commodity market recoveries.

Other contributing risk factors included lack of accurate and timely knowledge, data and information about products and production systems. Tanzania miners are reported to be not knowledgeable and informed on accurate global mineral materials prices. Accurate and precise forecasting of commodity prices (and of relevant exchange rates) continues to prove elusive even to mineral market analysts [6]. Thus, at any given point in time, there were often widely differing

price forecasts available for both the relevant materials and currencies.

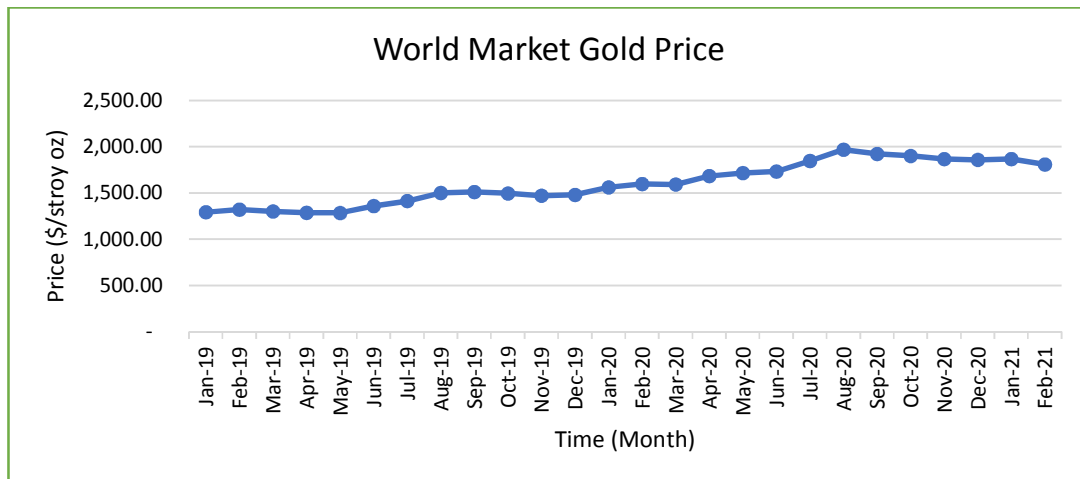
Significant changes in material prices of an extended duration, both up or down, remain the principal influence and negative effects upon mining operations and performances ([8]. Fears of reduced supplies of key inputs, processes and product outputs are growing due to measures to contain the virus at key mine operations across the globe. Several of the world's biggest mining groups have announced delays to investments, production and development projects because of travel and other restrictions imposed in response to the global pandemic.

All mineral materials were affected in one way or another by the Covid-19 pandemic [8]. For example, the base metals had all had substantial decreases in prices since the beginning of the year as the pandemic's economic impact reduced consumption across the metal and mining industry and caused a substantial amount of uncertainty, [8]. The base metals have all followed copper, as is traditionally the case in times of uncertainty, whose price decreased by 22% since January 2<sup>nd</sup>, 2021 while iron ore, zinc, lead and nickel have all fallen by 10% - 20% over the period. Cobalt and lithium carbonate prices fell by just 5% and 8%, respectively, over the same period (World Bank Data Base, 2021).

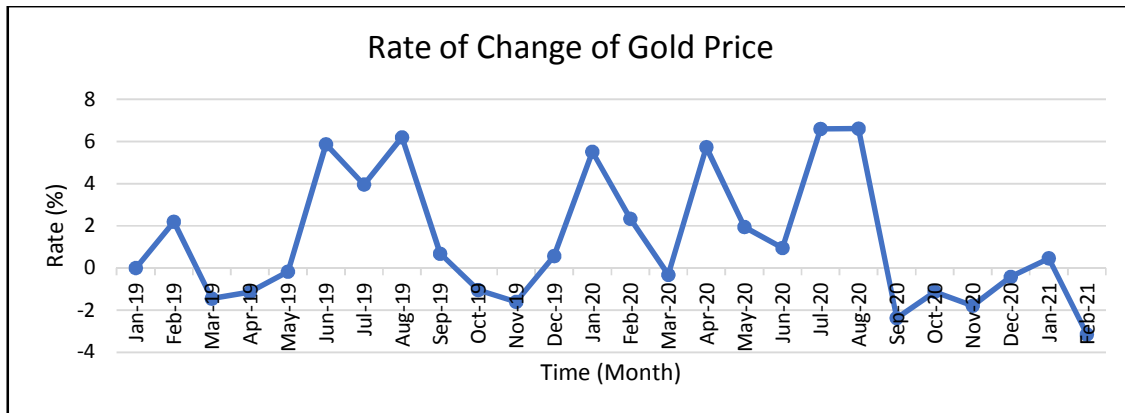
Despite easing back of late, iron ore's comparative price resilience during the global pandemic, it outperformed base metal benchmarks [8]. Iron ore prices have been supported by a combination of robust Chinese

steel (rebar) prices and weather-related supply disruptions in the first quarter were witnessed. The demand picture for iron ore has turned increasingly bearish as Europe and North America emerge as the pandemic hotspots and steelmakers responded by curtailing the production. The contagion in China, however, at some point appeared to be in remission, with economic activity normalizing. While this was predicted to boost the Chinese demand for iron ore, it was unlikely to be sufficient to fully offset the weaknesses globally.

It was surprising to note that the gold materials performed in a fashion similar to the 2008 financial crisis, in that funds with positions in gold in the future markets were forced to sell their gold to meet margin calls, raise cash and buy U.S. treasuries. Silver, despite record retail investment, had sunk to its lowest price in 11 years due to lower industrial demand. Despite being the archetypal safe-haven asset, gold, like everything else, eventually took a hit to the downside on the realization that COVID-19 would become a global pandemic. Through mid-February 2021, gold continued in its slow-burn bull market, driven by two main factors. The first was safe-haven buying resulting from global uncertainty, tied to the shutdown in China up to that point, and also the ongoing U.S.-China trade war and Eurozone weakness. The second was low to negative yields on high-quality government bonds; when funds had to pay for lending to governments, the attractiveness of gold increases, especially when the cost to hold is at a historical low.



**Fig. 4. Trend of World Market Gold Price**  
 Source: World Bank, 2021



**Fig. 5. Growth Rate World Market Gold Price**  
Source: World Bank, 2021

Figs 4 and 5 show the trend and growth rates of the world market Gold price in USD for the period from January 2019 to February 2021. Fig. 4 suggests that the trend has been that gold prices have been high and increasing during the sample time, from January 2019 to February 2021. Fig 5 suggests that the increasing gold prices have not been smooth and stable throughout sample time. There had been upswings and downswings during the Covid-19 pandemic. While international gold prices had risen; Covid-19 related disruptions such as lock-downs, travel and movement restrictions had caused artisanal gold supply chains to collapse and disrupting domestic gold prices. These disruptions significantly affected miners' incomes and might strongly impact the productivity of mine operations, sites and rural communities.

### 3.3 Mineral Material Price Comparative Analysis

The mineral material price changes between 2019 and 2021 were the most powerful cyclical upswings and downswings seen in that era. Influenced by complex global economic changes, it gave rise to the notion that the world is undergoing a mineral commodity 'large super cycles'. In fact, the cycles were much like any others, only longer, larger and stronger ones were observed during 2010-2014 [7]. Given the Covid-19 pandemic, cyclical downswings were observed (during January 2020 to April 2020) and upswings (from May 2020 to August 2020) which had also displayed many of the same characteristics as previous cycles, including slower demand growth, squeezed producer margins, reduced exploration and investment and disillusion with the development potential of

the resource sector [16,17]. The reasons for the current price cycles lie in the high volatility of demand for mineral commodities and the low responsiveness of mines' productions and supplies, [8]. The most important factors included the following.

*Firstly*, demands for many mineral materials are highly sensitive to changes in the rate of economic growth, technological changes and global socio-economic and political systems [7, 8]. This is in part because of the socio-economic sectors, users and markets in which these commodities are used. There is a high concentration of development mineral materials used in the construction of domestic economies and in the production of strategic and capital goods (like modern vehicles and heavy machineries) in developed nations and consumer durables (like fridges and cars). These sectors have a large investment component and tend to be more volatile than economic activities more generally (as measured, for example, by GDP).

*The second* reason for demand volatility was the stock-holding behaviour of manufacturers and users of mineral materials as the major and strategic inputs [7]. As the global economies accelerate so manufacturers and users build up their stocks of raw materials or intermediate inputs in the anticipation of increased levels of production, adding to the demand for mineral commodities. When global economies slow, manufacturers reduce their stocks of raw materials, suppressing the demand for mineral commodities, [8].

Productions and supplies of desired mineral materials in many developing nations are



typically uncertain, inflexible and producers find it hard to respond to fluctuations in global demands [7]. This inflexibility arises from the fact that mineral commodities are commonly produced at formal large-scale, capital-intensive firms and operations. For reasons of cost-effectiveness, producers like to run their operations at close to full capacity at all times. Even in the face of weakening demand and prices, the internal economics of their operations may result in producers continuing to produce flat out, weakening prices further.

Many formal large scale extractive firms are corporate entities and capital-intensive. The capital-intensive nature of mineral production explains another facet of investment, production and market supply inflexibilities – the difficulty in expanding production once all the existing capacity is used up. Most large, capital-intensive extractive projects take a long time to plan, arrange, develop, finance, construct and operationalize [7]. It is common for the new major mines to take seven to ten years from conception to production.

Accordingly, supply is often slow to respond to surges in the demand for mineral commodities and associated shortages. Prices are the mechanism by which the demand and supply of commodities are brought into balance. When markets are oversupplied and prices are low, producers are forced to cut costs. When they can no longer produce minerals economically, operations are temporarily downsized, closed or at times sold.

When markets are undersupplied and consumers are experiencing shortages, prices rise. This helps ration the available supply to consumers in line with their ability to pay. It also provides an incentive to producers to squeeze out as much production from their existing plants as they can and to invest in new production capacities [2]. However, supply adjustments, both in cyclical downswings and upswings, can be slow and take several years to complete. It may not be an exaggeration to say that the normal condition of commodity markets is in imbalance, with prices most of the time either trending cyclically upwards or downwards.

Most significantly, the cyclic nature of prices influences the industry's attitude towards investing in explorations, extraction, processing, value addition (beneficiation), and marketing. Oil and gas companies invest pro-cyclically,

meaning that investment takes place at higher levels when prices are high [7]. But this is correct given other investment conditions are palatable and consistent in the long run perceptible. There are good practical reasons for this.

*Firstly*, current mining material markets are difficult and rising prices provide a clear signal that the market is short of clear and consistent supplies such as petroleum product prices in Tanzania.

*Secondly*, when prices are rising, companies have needed additional financial resources to invest in new productions and supply capacities. Increasing and stable high prices provide confidence to foreign direct investors and groups financing resource companies boost their operating margins and increase their retained earnings in the host countries. An inevitable consequence of this pattern of behaviour is that large scale extractive company investment gives momentum to business cycles, contributing to a tendency for supply to overshoot on the upswing of the business cycle and undershoot on the downswing, [7].

Volatile mineral material prices can have dramatic impact on a country's exchange rate, driving the value of its currency higher when mineral material prices are rising and driving it lower when they weaken [7]. Capital inflows and outflows can further magnify this effect. According to the new Tanzanian legislations, firms are required to borrow and use domestic financial systems. These firms will borrow and use financials resources in Tanzanian shillings and use as operational and development activities. These investments will increase production capacities, mineral materials, exports, and thus earn more financial incomes in the form of foreign earnings. The net foreign earnings will contribute to effective functioning of foreign exchange markets and rates. These demand and supply dynamic shifts projects underlying future economic realities such as investments, productions, trade, distribution and consumption of sectors such as agriculture, industrial, mining, and social services. That is, the economic wealth of the country hosting the natural resources will increase, something which, given time, will be reflected in higher employment opportunities, wages and thus higher standards of living [7].

#### 4. CONCLUSION

The paper assessed levels of extractive material prices risks given the Covid-19 pandemic in

Tanzania. Covid-19 risks are defined as a public health threats or possibilities the pandemic (as an event) will adversely affect socio-economic entities, sectors and actors' abilities to achieve their desired objectives. The viruses that cause COVID-19 have health risks of infecting and affecting people of all ages, gender, races and nations.

The impacts of COVID-19 on extractive sector materials have been uneven, and have short, medium and long term effects on all commodity and service markets, sectors and socio-economic entities. When declines in the extractive sector materials prices are short-lived, e.g. from January 2020 to April 2020, collaborative global, regional and national policies can buffer their impacts. However, when a few and specific global extractive sector commodity prices remain depressed for an extended period, these global, regional and national policy makers need to find common and strategic solutions so the economies can adjust smoothly to a new norm. Because of COVID-19, the new norm for oil-exporting economies, consortiums, agencies and multinational corporations had come together to find reasonable solutions.

The levels of risks on the extractive sector product and market prices in the extractive sector are high in Tanzania. The global plummeting of the oil and gas prices was a direct consequence of an oversupply of fuel and a declining demand for fuel amidst travel restrictions and economic lockdowns. Lower and risk oil prices mean less exploration; drilling and process activities because most of the new oil driving the economic activities are unconventional and have higher costs per barrel than a conventional source of oil.

The levels of risks on the price of the mineral commodity prices were highly affected by the Covid-19 pandemic. There are various firms and market factors contributing to current price volatility, mechanisms and effects on the socio-economic factors given the Covid-19 pandemic. The internal firm factors include weak corporate financial strength and poor price-risk management strategies, as well as dynamic technological mining practices and methods at the operation levels.

All socio-economic entities have to support the functioning of perfect competitive extractive product and pricing systems during and after Covid-19 pandemic. All global, regional and

nation oil extractive sector organisations, alliances and firms work jointly and cooperatively to ensure stable market supplies and demand given efficient technologies, resources, infrastructure and social systems.

## COMPETING INTERESTS

Author has declared that no competing interests exist.

## REFERENCES

1. World Bank. A shock like no other: The Impact of COVID-19 on Commodity Markets. Special Focus, Washington, DC, USA; 2020a.
2. Brynjofss E, Horton J, Ozimek A. COVID-19 and Remote Work: An Early Look at US Data. NBER WORKING PAPER SERIES, Working Paper 27344; 2020.
3. Semboja Haji Hatibu Haji. "Situation Analysis of the Extractive Industry Sector and Covid-19 in Tanzania. A policy research report commissioned, financed and submitted to HakiRasilimali, (HR); Dar es Salaam, Tanzania; 2020.
4. Baffes J, Kabundi A, Nagle P. The role of income and substitution in commodity demand." Policy Research Working Paper 8495, World Bank, Washington, DC; 2020.
5. Available:<http://www.nber.org/papers/w27344>; 1050 Massachusetts Avenue Cambridge, MA 02138
6. Deloitte Touche. Commodity price risk management. It is a manual of hedging commodity price risk for corporates. Member of Deloitte Touche Tohmatsu Limited and Issued in Public Interest by Multi Commodity Exchange Investor (Client), Protection Fund, India. Copenhagen; Weidekampsgade. 2018;6: 2300 Copenhagen S.
7. Extractive Hub. Managing commodity lifecycles. Policy Brief Paper by the Mining Centre for Energy, Petroleum and Mineral Law and Policy University of Dundee; Dundee DD1 4HN United Kingdom; 2014.
8. Jason Sappor Thomas Rutland Gregory Rodwell Alice Yu Luke Nickels Ronnie Cecil. COVID-19 Impacts to Metals Prices: Volatility Is Here to Stay" - Part 1. An article appearing in the S&P Global Market Intelligence; 2021. Available:<https://sandpglobal-spglobal-live.cphostaccess.com/marketintelligence/c>

- ontributors/383089/greg-rodwell, New York, USA.
9. Sabine Roeser. Handbook of Risk Theory: Epistemology, Decision Theory, Ethics” ..., Springer Nature Switzerland AG. 2018;1.
  10. Papanikolaou D, Schmidt LDW. Working Remotely and the Supply-side Impact of Covid-19 (Working Paper No. 27330; Working Paper Series). National Bureau of Economic Research; 2020. Available:https://doi.org/10.3386/w27330; 1050 Massachusetts Ave. Cambridge, MA 02138 617-868-3900; info@nber.org.
  11. Semboja Haji Hatibu Haji. Concept of risk and Risk Management”. Lecture Notes for postgraduate masters in economics, monitoring and evaluation courses. University of Dar es Salaam. Dar es Salaam-Tanzania; 2014.
  12. Roeser S, Hillerbrand R, Sandin P, Peterson M. Introduction to Risk Theory”. In: Roeser S., Hillerbrand R., Sandin P., Peterson M. (eds) Handbook of Risk Theory. Springer, Dordrecht; 2012. DOI:https://doi.org/10.1007/978-94-007-1433-5\_1, Berlin, German
  13. World Bank Group. “Commodity Markets Outlook—Persistence of Commodity Shocks”, October. World Bank, Washington, DC. License: Creative Commons Attribution CC BY 3.0 IGO; 2020b.
  14. World Health Organization. Coping with stress during the 2019-nCoV outbreak, WHO, Geneva; 2020a. Available:https://www.who.int/docs/default-source/coronaviruse/coping-with-stress.pdf?sfvrsn=9845bc3a\_2 (accessed on 23 March 2020). WHO Headquarters in Geneva, Avenue Appia 20, 1211 Geneva,
  15. World Health Organization (WHO). COVID-19 strategic preparedness and response (SPRP). Monitoring and evaluation framework [updated 5 June 2020]. Geneva: WHO; 2020. [cited 8 June 2020]. Available:https://www.who.int/publications-detail/monitoring-and-evaluation-framework-2; WHO Headquarters in Geneva, Avenue Appia 20, 1211 Geneva, Telephone: +41-22-7912111
  16. World Health Organization (WHO). Mental Health and Psychosocial Considerations during the COVID-19 Outbreak, 18 March 2020. World Health Organization. WHO Headquarters in Geneva, Avenue Appia 20, 1211 Geneva; 2020b.
  17. UNESCO. Concept Note for the Celebration of the International Day for Universal Access to Information (IDUAI) 2020”, Research Report for UNUESCO; Paris France; 2020.

© 2021 Haji; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

*Peer-review history:*  
*The peer review history for this paper can be accessed here:*  
<http://www.sdiarticle4.com/review-history/69903>