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Energy Policy Turkey
April 2020

Editor's Note

Sezayi TOPRAK

Energy Policy Turkey (EPT), now widely recognized and followed throughout the world, has focused on energy strategies and policies all around the world. EPT evaluates countrywide, regional and worldwide studies and do analysis to have a deeper understanding on policies for energy supply-demand chain, security, and energy routes, energy related regional and international conflicts, etc. EPT's previous issues have proposed worldwide detailed statements to understand and shape the key elements of the global energy game.

Recently, the Coronovirus (aka Covid-19) pandemic has spread all over the world beginning from China in November 2019. Initially, it was thought as an endemic (like flu) affecting a region of China (Wuhan) having faced many endemic crisis before, and also Chinese government tried to cover the issue by suppressing voices of pandemic in the country, sharing very limited information with the world countries and the World Health Organization (WHO). Moreover, the WHO's contradictory statements and being late for announcing the Coronavirus as pandemic, accelerated spread speed of the virus.

Without any vaccine or known treatment the Covid-19 spreads very quickly killing may people not only China but also Italy, Iran, Spain, France, the UK and the USA, and weakening world economies resulting recession, depreciation or slumpflation for countries. In this issue we focused on energy (globally and regionally) and economic (in the context of globalization) impact of the Covid-19. In addition, an article is about the virus from the biological warfare perspective.

We look forward to your support, suggestions, productive criticism and advertise with our paper.

Energy Policy Turkey
April 2020

Brunt of Coronavirus in Oil Markets & 2020 Prices

Author

Oğuzhan Akyener

1. Introduction

Oil prices are one of the most important items affecting the trends in the global economy. In addition to global sights, being the price levels directly influencing the individual budgets and preferences, sociological impact reaches much higher levels than the expectations. That's why to have an idea about the tendencies and directions of the prices becomes much more important for the whole world (from individuals to the governments).

In order to make estimations for oil prices, initially we have to determine the roles and tendencies of main variables in the price equations. There are many different elements that are affecting the prices in the oil markets. To have a generalization, we can assume that;

- Supply - demand balances, including: new discoveries, stocks, number of drillings, production levels, interruption decisions, long-term contracts, development declarations and etc.
- Economic trends, like: global economic growth, GDP rates, substitution markets, us dollar parity, alternative investment opportunities, purchasing power and etc.
- Risks, such as: perceptions, political tensions, terrorism, security issues, natural disasters, unusual factors, biological or chemical treats and etc.
- Black oil capacity and their prices.

are the main four categorized drivers in oil price equations. While sometimes, some of these elements have individual effects on the equation and sometimes they may also affect the other variables and have a bigger impact on the generalized equation. Such as, today's most popular issue: Corona virus!

Without any doubt, corona virus is one of the most influencing drivers of oil prices, seen in the history. Global oil demand decreased around %20 due to spread and uncontrollable risks of this epidemic treat and the prices collapsed around %50.

In this study, after shortly describing the main items affecting the oil prices, corona sight and the near future dynamics will tried to be analyzed.

2. Supply – Demand Side

Before the corona virus era, world was consuming around a 100 million barrels of oil per day. This means a very huge volume of economy. Some portion of this consumption (nearly %5) belongs to the unregistered black oil sales (which are mainly coming from Iran, Venezuela, Nigeria and Syria).

From the supply side of the equation; we are faced with very important suppliers, such as US, Saudi Arabia, Russia, Canada, Iran, Iraq, China, Kuwait, UEA, Brazil and etc., which are affecting the dynamics.

OPEC (may be we can say that OPEC+) as being an integrated group of producers, is the most influential structure in the supply side of the equation. Moreover, in the OPEC group, due to technical and financial capabilities and being the Saudi Aramco a governmental company, Saudi Arabia (SA) is the most influential actor in the supply policies. SA has the capability of having sharp export cuts or extra supplies to the markets which directly change all the balances.

From the demand side, USA and China are the two biggest consuming countries. That's why, the acts, declarations or decisions of these players directly affect the price balances of oil.

Supply and demand trends can be affected by many different strides, such as:

- New discoveries usually means extra supply of oil.
- Conversely, while there was an important expectation for a huge structure to bear billions barrels of oil reserves and after the tests, the results are nothing, then this situation means less supply by comparing with the expectations, which affects the prices in upward direction.
- Declared stocks are the other factors. The difference between the reality and the expected volumes of stocks are also important issues directing the short term prices. Hence being the biggest consumers, US's and Chinese stock levels' positions are directly affecting the prices. In addition to these, new infrastructures to increase the stock capacity will also change the prices.
- Number of drilling rigs and continuing drilling activities are also important for the supply side of equation. Hence more wells mean more production levels.
- Increase in the production levels or possible decreases due to technical / non-technical problems directly affect the supply side, proportionally to the capacity.
- Interruption decisions, such as OPEC's agreed volumes of supply cuts directly affects the prices.
- New long-term sale contracts, which means further agreed of supply and demand volumes also have an effect on the prices.
- New field development declarations of companies and FID agreements are the other important issues affecting the oil prices.

All different kind of factors directly or indirectly affecting the prices have to be considered in the analysis.

3. Economic Trends

Economic trends are also the other key drivers affecting the oil price. Global economic growth, GDP rates, substitution markets, us dollar parity, alternative investment opportunities, purchasing power and such economical facts have direct or indirect impacts on oil prices. For example:

- While the global economic growth is high, then the energy investments and indirect demand growth naturally be high.
- US dollar parity usually has a reverse acting tendency with oil prices. Hence, usually the brokers tend to cash out their shares in oil markets and put them in US dollar based stocks and bonds or vice – versa according to their expectations. In this regard, FED's declarations have direct effect on the prices.
- Similar with the USD's situation, the same tendency occurs within the alternative investment opportunities while compared with oil markets.

4. Risks

There are also different kinds of risks affecting the oil markets, supply – demand balances and naturally the prices. For example:

- Perceptions sometimes may have resulted in higher effects on the prices while comparing with the reality. To give an example, after the negative results of the OPEC + meetings in the beginning of March 2020 (while the members couldn't agree on additional cuts to deal with the corona virus effects), initially Putin's and later Saudi Arabian's declarations made the prices collapse up to the 30 $/bbl levels. In this concept, Saudi Aramco declared to sell crude oil to Chinese buyers with an additional 4 to 8 $/bbl discount rates and to supply additional 2 million bbld (then 2,6 million bbld) to the global markets. In reality, neither agreed such a discount nor such an additional volume of supply applied. However, due to the perceptional effects of these declarations, the prices collapsed into the annual lowest levels. Moreover, after these acts, Trump declared some messages for both sides to agree on additional interruptions around 10 – 15 million bbld. And the prices (for Brent) jumped from 24 $ levels to 34 $'s. Although it is not possible to reach such cutting levels, the perceptions changed the dynamics. For all that, we are sure these perceptional effects are short termed.
- Political tensions, terrorism, security issues, natural disasters, unusual factors, biological or chemical treats and such force majeure issues are also other risk bearing items affecting the oil prices.

Black Oil

There is a huge volume of unregistered black oil sales in the global markets. Currently the origins of these volumes are mostly Iran, Venezuela, Nigeria, Iraq and Syria. The price levels of the black oil sales are usually 5 to 15 $ / bbl are lower than the normal registered volumes. That's why the volume of the black oil market directly decreases the price levels and supply expectations.

5. Corona Virus: A Versatile Sharp Effect on Oil Prices

Currently, Corona virus (which is a high influential biologic treat for the whole world) is the most effective item in the oil prices equation. All these 4 main categories can be directly or indirectly to be associated with the corona virus effect on oil prices.

Nearly from the beginning of the 2020, in addition to oil markets, all the global economic balances have been shaken by a biological treat: Corona Virus! The Corona virus (which has started to spread in China and brought life to a halt) has caused oil prices to drop and then to remain at low levels despite all other enhancing factors.

Although there are many other elements which has to cause the prices up (such as the builds in US stocks, oil supply problems in Libya, Nigeria and Iraq, OPEC+ not to being able to agree on high levels of production cuts), Corona Virus by overturning all the balances, made the other effects nearly negligible.

But why? And how Corona Virus has such a great effect on oil prices?

The answer includes 4 types of effects, which are real global demand drop, perceptional sight, indirect sight and a possible collapse in the supply potential.

From the sight of real demand drop, China (in the normal conditions) during pre-Corona Virus times used to have an average 13,5 million bbl / day oil consumption rates. This means nearly %13,5 of the global consumption is coming from the Chinese side. A sharp drop in China's consumption naturally cluttered the prices. In this case, at the initial days of Corona Virus, when the Chinese government proclaimed a long holiday for the whole country and declares a curfew, due to break down of industrial and transportation demand, total crude consumption fall down around %40's. This directly resulted in Brent prices to smashed to 50 $ / bbl levels. After the extended curfew period ended, except the quarantined cities, life expected to turn into normal levels in the other lower risked regions of the country. But the situation didn't go like that. These expectations initially made the prices up, but while the virus started to spread in a faster manner, nearly the whole country had to turn their houses and try not to go out as soon as possible. All economical acts, industrial production, meetings, trade flows and strategic plans shut down. Many countries canceled and suspended the flights with China. And this made the crude prices continue to drop, instead of the expected recovery period.

In February 2020, average Chinese daily consumption was around 8 million bbl. Which means an average 5,5 million bbl / day drop in the direct global demand. Then with the beginning of April, the consumption levels of China reached again 10 million bbld levels. But this time, the virus has already spread globally. And the global demand collapsed (around %20) up to 80 million bbld levels. This is the direct demand drop effect on the crude prices.

Here we have to note that, the price reductions is continuing in spite of the Libyan supply cuts around 1,2 million bbl / day. If there were no cuts like that, then the prices would reach much lower levels and this would previously collapse (mostly American and Canadian Shale oil producers) the supply side of the equation.

From the perceptional sight, apocalyptic scenarios related to the virus and fear of spreading to other countries can be accepted as the other type of (usually dropping) effect on the oil prices.

From the indirect sight, due to economic collapse and virus risk, all international transportation and trade flows badly affected and this resulted in an indirect global consumption decrease.

Currently, we are on the stage of a global spread and we are not sure how long this period will continue and affect the further scenarios.

No one can model the biological risks and treat levels for different countries.

Of course, the prices are expected to continue to decrease due to additional demand drops and indirect or perceptional sights. But another important point is virus has started to spread in oil exporting countries also. This means the supply side of the equation will also start to decrease due to health problems.

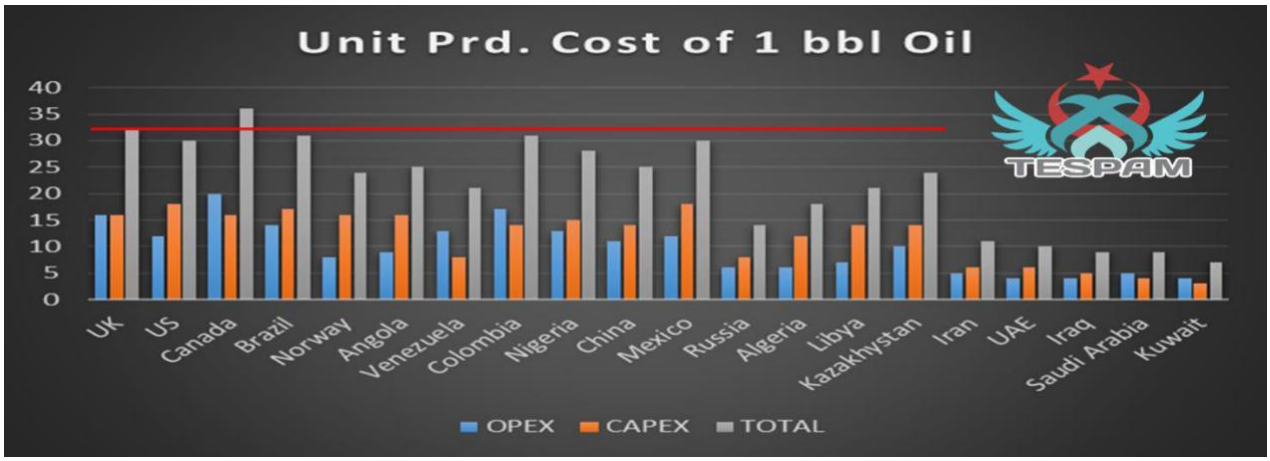
In addition to health sight, ongoing low-level oil prices made oil companies suspend their activities, delay their meetings, cancel their investments and in the worst case (if they can not find available commercial storages) stop their productions. This means a hard break down in the supply side of the equation.

In this concept, the dropped levels of oil prices has also badly affected the smaller oil suppliers mainly in US and Canada. Nearly half of these types of companies are on the edge of bankruptcies.

This naturally means that, we can expect some incremental fluctuations to reach the natural balanced levels due to possible decreases in the supply side in the further stages! Our estimations show around a 9 million bbld of a natural possible supply cut globally up to the end of July (due to low-level oil prices and economics).

In the concept of these estimations, we initially have to check the average unit production costs of different countries.

TESPAM's estimations on the average unit production costs of 1 bbl oil in the current situations are given in the graph below:



Graph 1: Unit Production Costs for 1 bbl Oil in Different Countries

As can be understood from the graph above:

- NOTE: Transportation and tax costs are not included into the calculations.
- Many of the fields in some countries have to be stopped the production due to uncommercial conditions.
- Tight oil producers in US and Canada will be affected highly.
- The low level oil prices will directly affect the supply volumes and step by step, more companies will stop the existing producing fields due to not being profitable.
- This will affect the total supply volumes. Which means, the oil prices will increase up to a natural balance will be reached.

This means, more bankruptcies, higher unemployment rates and political risks for many countries. As a result, as can be seen in Trump's attempts, someone has to intervene the situation and US acted!

In addition to unit costs, break-even prices are also important for the oil exporting countries. Our estimates for the break-even prices (for 2020 budgets) of the due exporting countries are given in the graph below.

Graph 2: Fiscal Break-Even Prices for 2020 Budgets

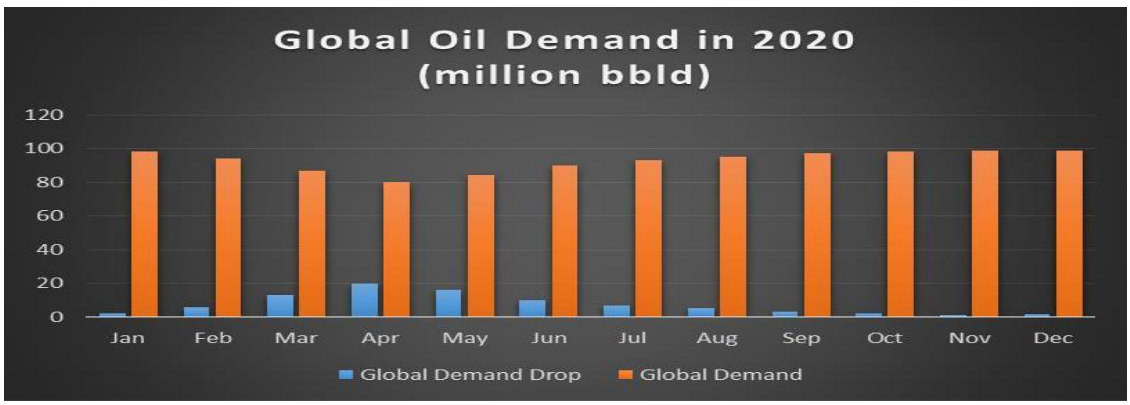
As can be understood from the graph, only Qatar has the capability to handle the current low-level oil prices without any problems. By the way, we also have to note that, with its huge financial capacity, Saudi Arabia, Kuwait and UAE are the other important players to be able to manage the ongoing price crises. However, by reading this graph from the sight of macroeconomics, all these players (including Russia and Saudi Arabia) may be expected to find an agreement to get the prices up! This "OPEC +" conflicts will not be able to be continued for a long time.

As an additional note, we have to mention that, low-level oil prices is a big chance for the huge investors. Because, nearly all the stock market values of very popular oil companies have sharply declined. But everyone is sure that this situation will not be the same for a long time. That's why, according to their financial abilities, some funds are directly focusing on the oil assets. For example, Saudi Sovereign Wealth Fund bought some stakes around $1 billion in Shell, Total, Eni, and Equinor (which are known as the European oil majors). This is another point to consider!

While the supply side's situation is like this, now to analyze the balances, demand side of the global crude oil equation has to be estimated.

Corona virus effect will continue nearly for the whole year. Some economic precautions are being taken by the governments. But no one is sure about the real results on the economies. Supply and demand balances will continue to be the most important issues to consider.

According to our estimations, global oil demand expectations are given in the graph below:



Graph 3: Global Oil Demand and Demand Drop Estimations

Note:

- Actual data is used up to the end of March.
- April is assumed as the worst peak time period for global corona spread.
- After the end of April, the effects of the virus is assumed to be decreasing.
- Due to collapsed economies, although there are some preventions by the governments, oil demand will not be able to reach up to 100 million bbld levels.
- In December due to weather conditions and climate effects, a very small increasing effect of corona virus may be observed again in some countries.

A huge demand drop started in China in January. Then the drop has continued with an increasing rate globally, up to the end of April. In April, average demand drop is estimated to be around 20 million bbl. Where, 8 million bbld drop is coming from US, 5 million bbld from Europe, 2 million bbld from China and 5 million bbld drop from the rest of the world.

According to our expectations, the bottom line may be in April and with the beginning of May, the virus effect may be weaken. As a result, by considering all due fluctuations, we expect an average of 92,8 million bbld of global demand in 2020.

After shortly analyzing the demand side of the equation, now we have to consider the other side, which is supply potential.

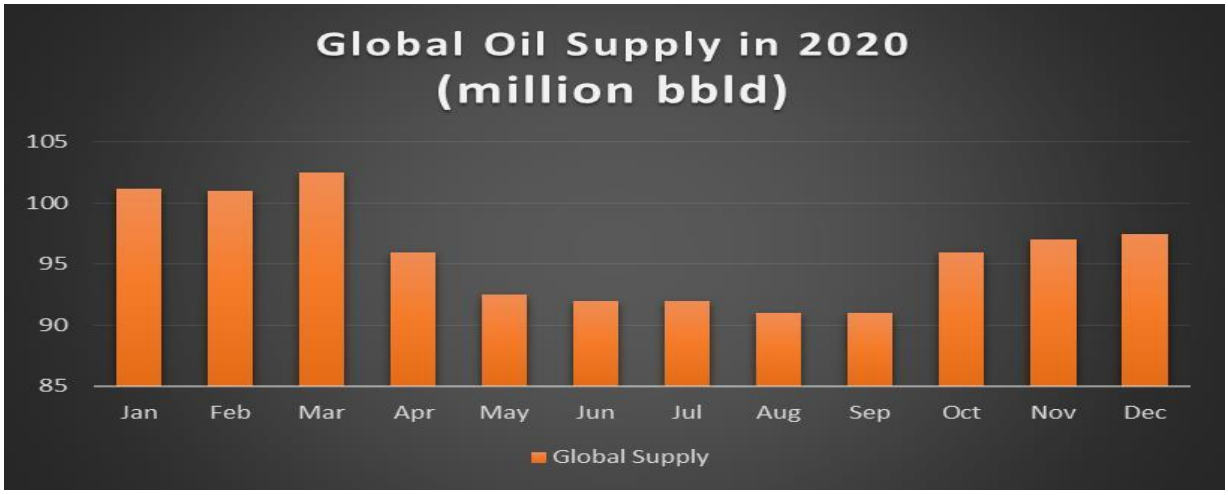
Low-level oil prices and storage constrains are the main drivers influencing the supply side of the equation.

Global crude oil storage capacity, including the offshore terminals and transportation units, is estimated to be around 7 billion bbl. More than 5 billion of this volume is mostly industrial (private) based. Around 1,6 billion is coming from governmental storage facilities and the remaining volumes are from offshore infrastructures or tankers.

Although these volumes may be seen as too big to fulfill, remaining unused storage capacity is estimated to be around %20 of the total volumes. This means, with the additional supplies and continuing less demand, the unused part will be filled and this will make some countries to directly stop production only due to storage constraints. This situation has started to be observed in Nigeria, Brazil, Angola, Norway, Colombia, Mexico, Russia, UK, US and Canada.

By adding the “low price level” effect and the commercial constrains in the equation, the total estimated supply drop is estimated to be around 7 million bbld levels up to the end of June 2020. Where nearly 1,8 million bbld supply drop is expected to be from US tight oil.

In this regard, estimated natural global oil supply (without OPEC++ agreed cuts) is estimated as shown in the graph below.

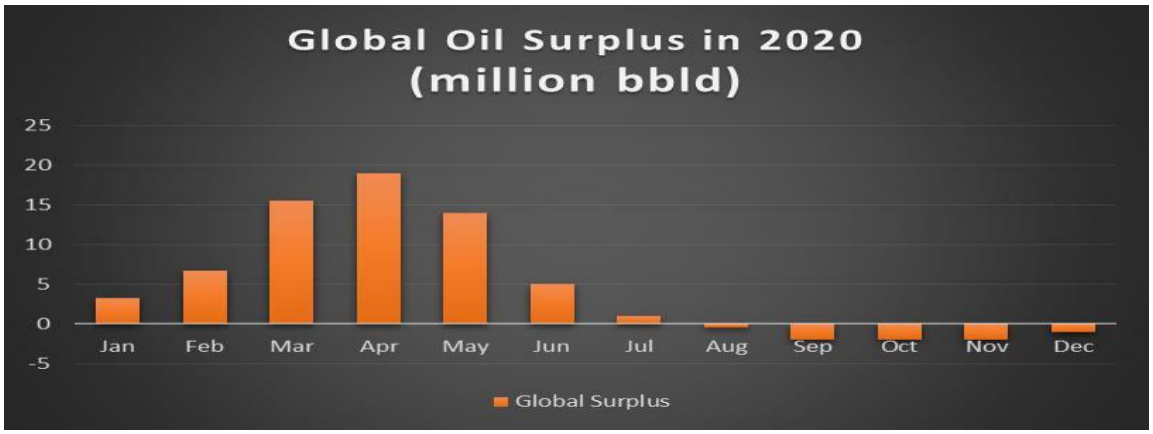


Graph 4: Global Oil Supply (without OPEC++ agreed cuts)

As can be seen from the graph,

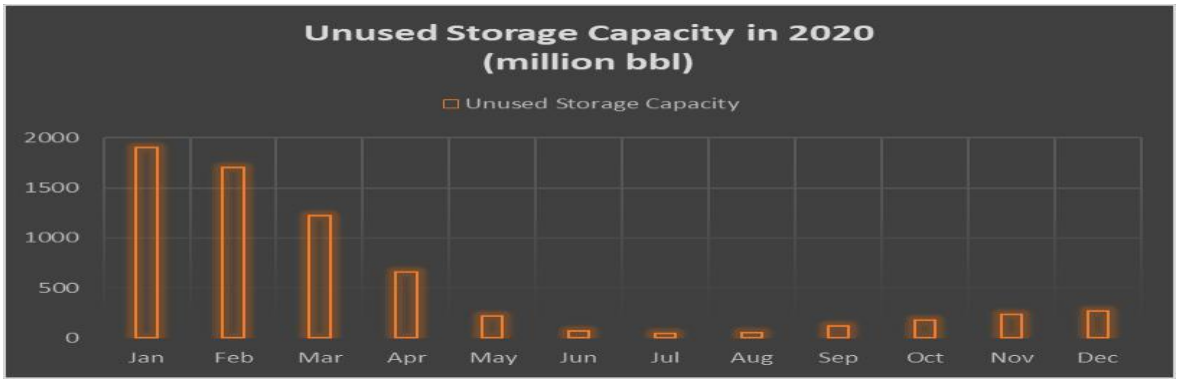
- Due to mainly Saudi Arabia, supply potential reached to the highest levels in March.
- In April, supply will start to drop globally due commercial and stock capacity constraints and this situation will continue up to the end of July.
- In July average supply potential is expected to be around 94 million bbld. Where the total expected drop will be around (by comparing with March) 8,5 million bbld.
- With September, global supply will start to increase again.
- Annual average supply potential is 97,5 million bbld.

The global crude oil surplus will be as shown in the graph below:



Graph 5: Global Crude Oil Surplus Volumes (without agreed OPEC ++ cuts) in 2020

As can be understood from the graph, there will be a big gap between the supply and demand volumes in the first half of the 2020.



Graph 6: Global Unused Crude Oil Storage Capacity (without agreed OPEC ++ cuts) in 2020

Moreover, the above graph gives some clues about the global unused storage capacities, which has a huge effect on the supply balances. As can be understood, with the high levels of positive surplus period, nearly all the available stocks will be fulfilled globally.

In this concept, by combining all the related items, 2020 Brent price estimations are given in the graph below.

Graph 7: Brent Prices Estimation (without agreed OPEC ++ cuts) in 2020

In this scenario, our estimations show that:

- Prices will hit the average bottom level in April around 30 $ / bbl (for Brent)
- Annual average will be around 44 $ / bbl.
- Prices will start to increase with the beginning of May.
- Note: Other possible political or perceptional risks and effects are neglected in calculations.

In addition to these scenarios, as expected before, OPEC ++ (with the attendance of US and other oil exporters) hold a meeting on 9th of April to discuss the possible output cut. And they agreed on a joint 10 million bbld level drop in their supplies.

Off course, it is not easy to implement the decision practically. The main burden will be on states that are controlling their domestic markets through their huge national oil companies. This means, first step has to come from Saudi Arabia.

According to some statements, Saudi Arabia will cut its output around 4 million bbld. And Russia will drop the supply around 2 million bbld. Although these are not the official declarations, the proposed volumes are acceptable. In addition to these, Mexico officially rejected the agreement due to its previously taken political targets. (In the best case, it can make some cuts around 100 – 150 k bbld, instead of the OPEC quota 400 k bbld.) Every government has some commercial and political targets to follow. Moreover, financial capacities and the general stability of the countries are also important to be able to take actions. For example, no one can persuade Iraq, Iran and Venezuela for any output cuts. And due to some binding agreements, some countries may accept only a small and limited decrease in their supply volumes such as: Azerbaijan and Kazakhstan. From the sight of US, because of the market conditions, only a natural production drop (due to economic and stock capacity constraints) will differ the output (which means instead of a planned cut, there may be a projected drop).

By taken these issues into consideration, in the OPEC ++ output cut scenario, (as can be shown in the table below) we have assumed that:

- Total decrease in the crude output is due to planned cuts and natural drops in supply potentials.
- Planned cuts usually is hold by financially strong NOC's, like Saudi Aramco. These kinds of cuts are accepted as OPEC ++ agreed planned cuts.
- The second type of cut is the natural drops. Which occurs due to financial and stock capacity constraints. Like the situation in some of the fields in US, Canada, North Sea Offshore, Russia, Kazakhstan and etc.
- Total decrease in the output means the total of these two drops.
- This seems a practically possible and applicable scenario for all sides of the agreement.

	OPEC ++ planned cut	natural drop (due to commercial or stock capacity constraints)	total decrease in output
Apr	3	3,5	6,5
May	5,5	4,5	10
Jun	3	7,5	10,5
Jul	2	8,5	10,5
Aug	3,5	8	11,5
Sep	4	7,5	11,5

Table 1: Assumed Output Decrease Volumes After OPEC ++ Meeting

As can be seen from the table above, in April, Saudi Arabia will decrease its average supply around 2 million bbld. The remaining part will be held by the other OPEC + members (mostly Russia).

In April, natural drop will be around 3,5 million bbld globally. 0,5 million of this volume is estimated to be US & Canadian tight oil supplies. Another 0,5 million is to be Kazakh and Russian oil and 0,2 million will be originated from the North Sea fields. The rest is mostly from the OPEC members.

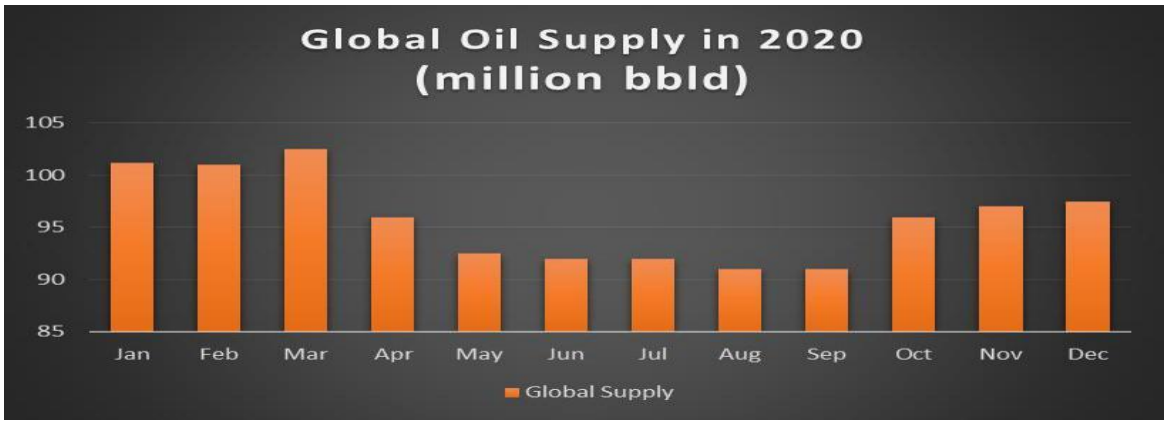
Due to continuing low-level oil prices and economical effects of Corona Virus, naturally dropped volumes are expected to increase. In May, total decrease output will be able to reach 10 million bbld levels. Then it may continue with some additional volumes. Because the natural

drops are growing. With this situation, the heavy load on the shoulders of Saudi Arabia will decrease.

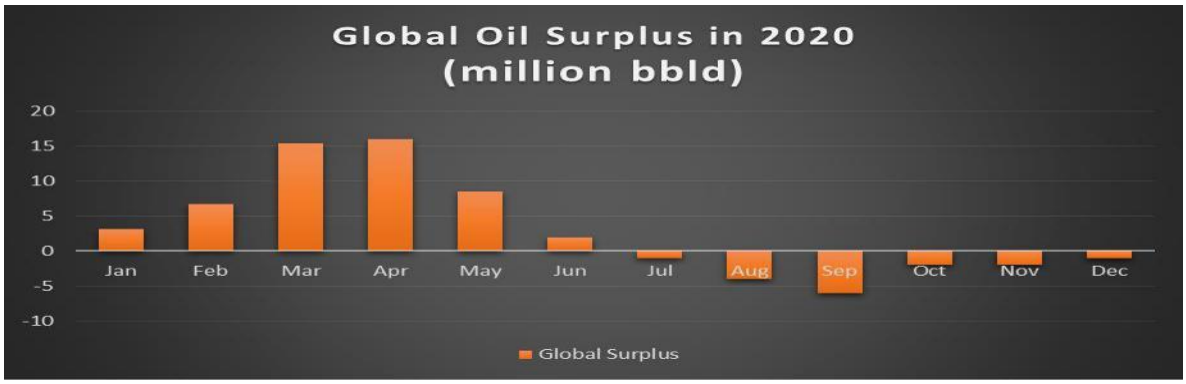
In our scenario, although the current 10 million output cut decision has taken for 3 months, the period is assumed to be extended up to 6 months. We take into consideration the unused stock levels and the crude surplus volumes for this possible extension.

As a result, the revised "OPEC ++ 10 million bbld output cut scenario" was prepared as can be observed in the graphs below.

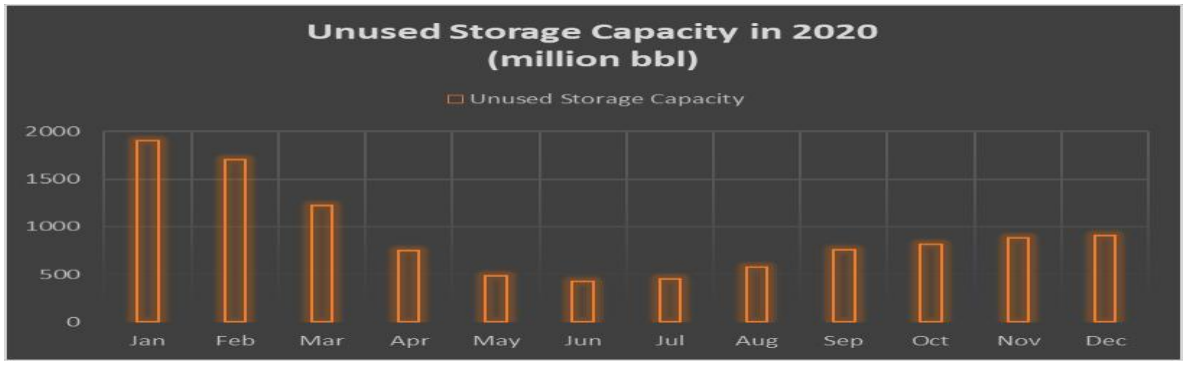
In the first graph, global oil supply with OPEC ++ agreed cuts are shown. In the next graph, revised surplus values are given. With the further graphs, the updated Brent prices, unused storage capacity volumes with the OPEC ++ cuts are mentioned.



Graph 8: Global Oil Supply (with OPEC++ agreed cuts)

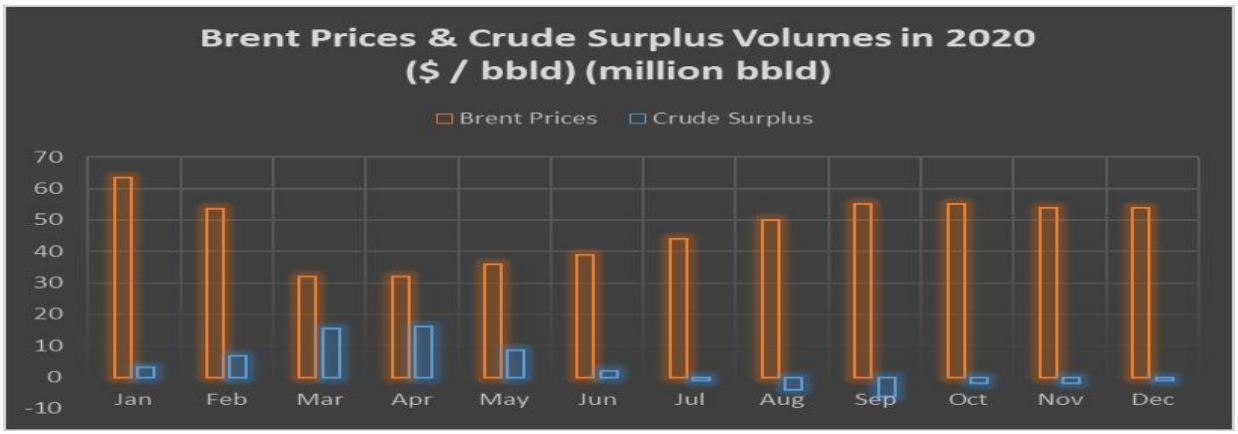


Graph 9: Global Crude Oil Surplus Volumes (with agreed OPEC ++ cuts) in 2020

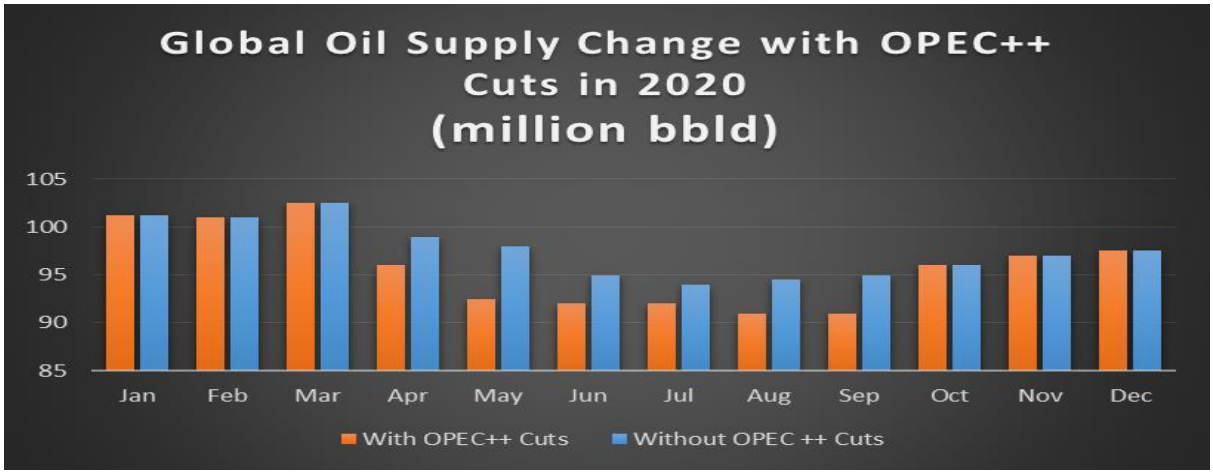


Graph 10: Global Unused Crude Oil Storage Capacity (with agreed OPEC ++ cuts) in 2020

Graph 11: Brent Prices Estimation (with agreed OPEC ++ cuts) in 2020

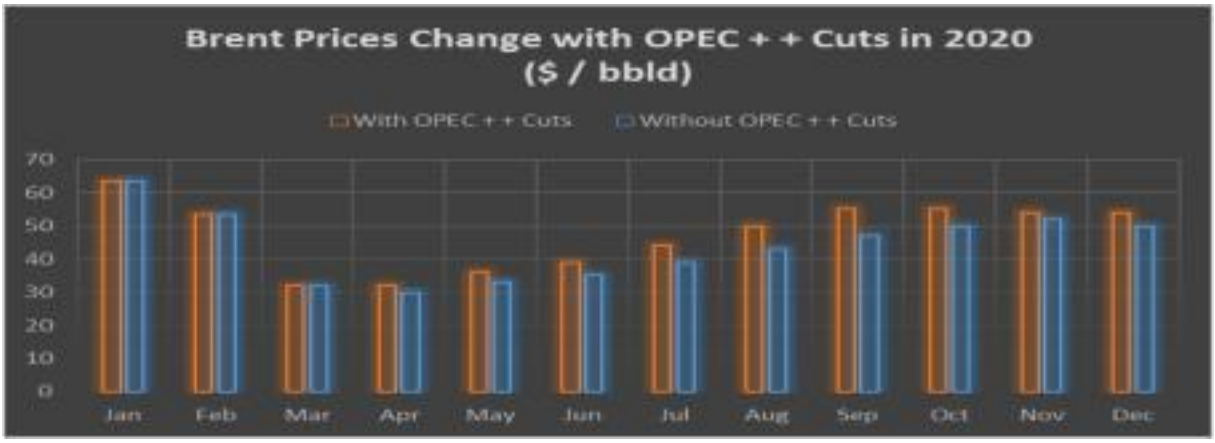


Graph 12: Brent Prices and Crude Surplus Volumes (with agreed OPEC ++ cuts) in 2020



Graph 13: Global Oil Supply Change with Agreed OPEC ++ Cuts in 2020

As can be observed from the graph above, annual average supply potential decreases from 97,5 million bbld levels to 95,8 million bbld.



Graph 14: Brent Prices Changes with Agreed OPEC ++ cuts in 2020

As can be understood from the revised graphs above, surplus rates, unused stock capacities and the crude prices will slightly change. Prices will again hit the average bottom level in April around 32 $ / bbl (for Brent) and annual average prices will be around 47,3 $ / bbl.

In addition to these assumptions, after we have completed all the due assumptions, at last OPEC declared the agreed volumes of supply drop. It will be better also to add this scenario in the paper.

In this regards, OPEC ++ attendees agreed on to cut:

- From 1 May to 1 July 2020 : 9,7 million bbld,
- From 1 July to 1 January 2021: 7,7 million bbld,
- And from 1 January 2021 to 1 May 2022: 5,8 million bbld.

As being the same in our assumptions, they already have agreed on extended "output cut period". This means,

1) Corona treat will continue for longer periods,
2) Oil industry and the global economies will be much more damaged then the expectations due to the corona spread and ongoing low level prices. And this also means, the sector will not easily be recovered.

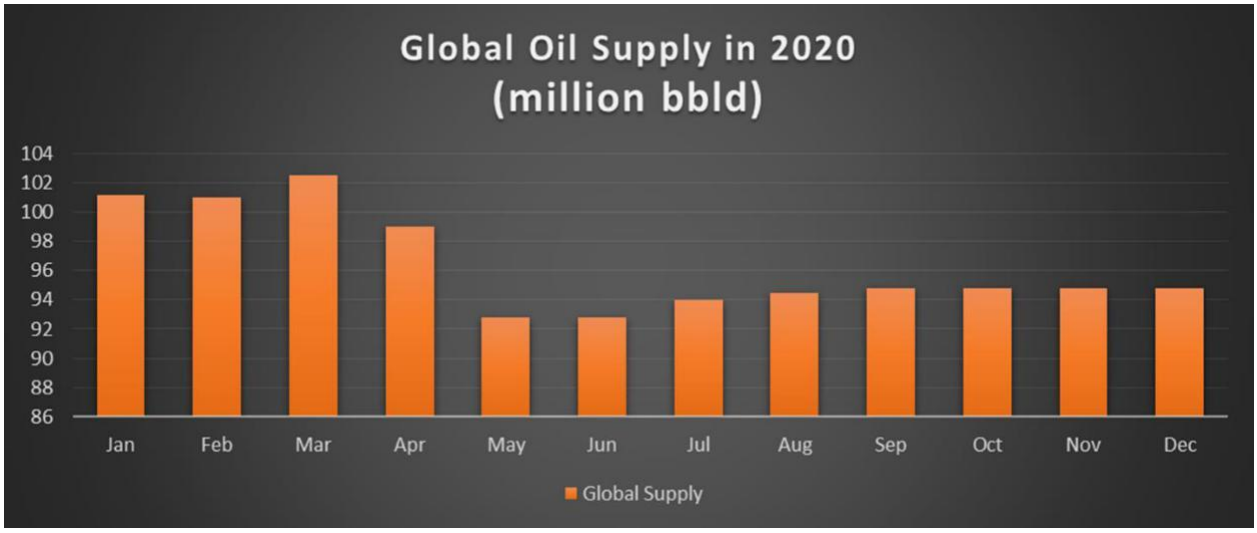
By updating the above graphs and the assumptions with this new scenario,

	OPEC ++ planned cut	natural drop (due to commercial or stock capacity constraints)	total decrease in output
Apr	0	3.5	3.5
May	5.5	4.2	9.7
Jun	2.2	7.5	9.7
Jul	0	8.5	8.5
Aug	0	8	8
Sep	0.2	7.5	7.7
Oct	0.7	7	7.7
Nov	1.2	6.5	7.7
Dec	2.7	5	7.7

Table 2: Assumed Output Decrease Volumes After the latest OPEC ++ Meeting Declarations

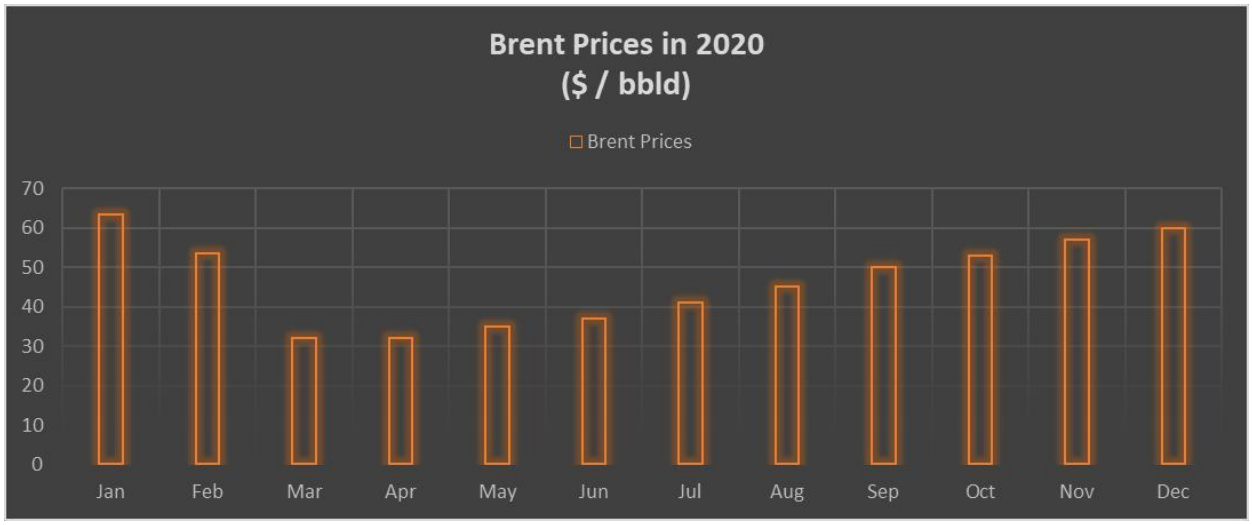
As can be seen in the above table, planned cut levels and the burden on the Saudi Arabia will be lower and the natural drop will continue to effect the total supply.

Total updated global supply will be as can be seen in the graph below. And the annual average is 96,4 million bbld. Which is a little higher than our previous assumptions.



Graph 15: Global Crude Oil Supply Volume (with officially agreed OPEC ++ cuts) in 2020

And the updated Brent prices can be seen in the graph 16, where the annual average is around 46,58 $ / bbl.



Graph 16: Brent Prices (with officially agreed OPEC ++ cuts) in 2020

It is obvious that these price levels will continue to hit mainly the non-governmental oil and gas companies. Having high operational costs, lack of finance, storage facility constraints will worsen the situation. Although NOC's will be negatively affected by these crisis, possible governmental support may help them to handle the risky period. In this regard, undoubtedly OPEC's influence in the oil markets will increase.

After all these estimations, some of the experts may ask that if there is a possibility for oil prices to crash into 10 $ / bbl levels. Of course there is always such a possibility. Hence sometimes

perceptional or political factors may have higher influence on the prices than the all other factors. However, such a possibility is very weak. In addition, no one is %100 sure about when the corona virus risk will leave the earth. We can only make some estimations by taken into account some assumptions. Moreover, updated data and the alterations always have to be followed very carefully. Since all the dynamics are constantly changed, the forecasts need to be updated constantly.

It should not be forgotten that the most accurate value is the most up-to-date ones!

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Coronavirus Crisis and the Middle East

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1. Overview of the Coronavirus Crisis

Since the Coronavirus, also known as Covid-19, spread outside of China in January 2020 it quickly turned into a global crisis of unprecedented scale, taking a high toll on human life and laying baring the fragility of battle-hardened economies that had not seen a shock alike since the financial crisis in 2009. Travel restrictions, cancelled events, closures, and curfews put a severe strain on Middle Eastern economies that were already seeing a slow-down in oil demand and a free fall in oil prices. The crisis wreaked havoc on economic and societal levels, producing supply, demand, and asset-side shocks. Most severely feeling the impact of the uncontrollable expansion of the infectious disease in the Arabian Peninsula are failed states, conflict regions, poverty-stricken dense societies, and oil-dependent economies of the Gulf region.

2. Geo-economics in the Middle East

In essence, the fast pace of globalization post-1990s resulted in a hyper-connected world opening doors to new opportunities for trade but also urging actors to stay vigilant in the face of emerging threats in all walks of life. If the perceived threat to basic or important values and interests has a surprise element, about when or where the incident will occur, and a finite time for response, then the situation today can be defined as a crisis.[1]

The health crisis revealed by the Covid-19 pandemic has a significant impact on political, economic, and social life on a global scale. It has affected more than 1.3 million people in 200+ countries with casualties soaring day by day particularly in Iran, mainland Europe, and the Americas.[2] The Middle East, except for Iran, has taken albeit a smaller share of the viral spread with confirmed cases of only 2,752 in Saudi Arabia, 2076 in the UAE and 1,322 in Egypt,[3] with actual numbers possible higher than reported. This should not, however, obscure severe economic and structural dislocations, and destruction of wealth due to the virus. A new policy brief by the UN Economic and Social Commission for Western Asia paints a grim picture where, due to increased food insecurity, joblessness, and supply-chain disruptions, 8.3 million people will fall into poverty in Arabia due to Covid-19.[4]

The worldwide economic recession is expected to be profoundly deep, long, and painful for countries dependent on commodity exports, tourism, and construction, many of which have unsustainable debt levels or budget deficits. Although the Middle East is relatively isolated from main areas under impact, thanks to its sunlit geographic location, it feels the negative spill-over effects of business operations, logistics, and trade on all facets of life. PMIs have declined at quickest rates ever. Majority of countries are ill-prepared for a multi-layered economic earthquake of this magnitude, let alone have a post-crisis mitigation strategy to sooth the impact

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1 Robert L. Pfaltzgraff Jr., *"Crisis Definitions/Characteristics,"* Security Studies and Crisis Management, GMAP, The Fletcher School of Law and Diplomacy, Tufts University, 2014.

2 Johns Hopkins University, *"Covid-19 Global Cases by the Center of Systems Science and Engineering (CSSE),"* Live Updates, April 5, 2020 (accessed April 5, 2020); available from https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6.

3 Ibid.

4 UN Economic and Societal Commission for Western Asia, *"New ESCWA Brief,"* Beirut, Lebanon, April 1, 2020 (accessed April 5, 2020); available from https://www.unescwa.org/news/new-escwa-brief-83-million-people-will-fall-poverty-arab-region-due-covid-19.

on a collective scale. As revenues dry up and dollar liquidity crunch looms,[5] it will become an uphill struggle to service massive debt loads. Even if life snaps back to normal, or anywhere close to pre-crisis days, it will clearly entail a powerful activism of the state apparatus to intervene on and regulate markets akin to the post Great Depression days of 1930s. The potential new status quo on the horizon even leads some to question "if the end of capitalism is in sight".

The problem is that in the Middle East, state is still the prime diverter of wealth. Despite bold reforms and incentives put in place, the private sector consists mostly of state-backed enterprises or cash-strapped SMEs with little shield against intensified global economic headwinds.[6] A World Bank report even before the crisis, in late 2019, confirms that the tiny 0.6% regional growth rate is "only a fraction of what is needed to create enough jobs for the fast-growing, working-age population".[7] Facing the prospect of a sharp rise in fiscal deficits, governments have also started to scale back state projects, undercutting the impact of stimulus measures.[8]

Take the UAE as an example, which is supposedly best positioned to withstand the crisis: Abu Dhabi enacted the Vision 2021 program to diversify its economy; yet, the country's GDP is 40% comprised of oil exports and the remaining on financial services, tourism, construction – all of which are one way or other hard-hit by the global downturn. Its fiscal break-even price is $70 per barrel. Conversely, take Saudi Arabia: Saudi Vision 2030 is the code-name of the national transformation program that Riyadh enacted to reform and prepare the country for the post-oil era, but the success has been mixed thus far. The break-even oil price in 2017 had dropped from $92.90[9] per barrel to $79.70, but now stands at a far-off $83,[10] much higher than Russia's $43. This is hardly suited to defend against a sustained economic shock elevated by oil prices as low as $20. On top, oil-backed collateralized loans of private operators have dropped in value by over 60% in three months putting tremendous strain on the global energy sector.[11]

Any recovery is bound to take an extended period of time, witnessing survival of the fittest and consolidation of power. Perhaps the most difficult aspect of it is this dual-shock nature for Middle East oil producers, to be caught off-guard with shrinking budgets and falling demand for exports. The world's third largest oil producer, Saudi Arabia, expects windfalls however

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5 Reuters, *"Gulf banks put brakes on lending as dollar liquidity crunch looms,"* Dubai/Riyadh, April 1, 2020 (accessed April 7, 2020); available from https://www.reuters.com/article/us-health-coronavirus-gulf-banks/gulf-banks-put-brakes-on-lending-as-dollar-liquidity-crunch-looms-idUSKBN21J5HR.

6 The World Bank, *"MENA Faces Another Year of Subdued Growth, with Bolder Reforms Needed to Boost Private Sector,"* Washington D.C., October 9, 2019 (accessed April 5, 2020); available from https://www.worldbank.org/en/news/press-release/2019/10/09/middle-east-north-africa-faces-another-year-of-subdued-growth-with-bolder-reforms-needed-to-boost-private-sector.

7 Ibid.

8 Reuters, *"Gulf banks put brakes on lending as dollar liquidity crunch looms,"* Dubai/Riyadh, April 1, 2020 (accessed April 7, 2020); available from https://www.reuters.com/article/us-health-coronavirus-gulf-banks/gulf-banks-put-brakes-on-lending-as-dollar-liquidity-crunch-looms-idUSKBN21J5HR.

9 TESPAM, "Energy Geopolitics in the Middle East after the OPEC Summit," May 2017 (accessed April 5, 2020); available from http://dergipark.gov.tr/download/issue-file/6557.

10 IMF, *"Breakeven Oil Prices,"* IMF 2020 Projections, 2019 (accessed April 5, 2020); available from https://data.imf.org/regular.aspx?key=60214246.

11 Oil.com, *"Advice for Investors Looking for 'Bargains' In A Distressed Energy Sector,"* Daily Brief, April 6, 2020.

from higher volumes of production and exports,[12] but skeptics say this is unsustainable in the long-term.

3. Developments alongside the Coronavirus Crisis

On the positive side, the Covid-19 crisis enabled public and private entities to accelerate their digital transformation and embrace knowledge economy. Home-office working, remote conferences, and using collaboration tools, which authorities would previously disapprove of, became the norm within days. The economic impact of the crisis, although varied by country, is generally grouped into three categories: Supply-side, demand-side, and asset-side effects. On the supply-side, skilled workers being sick or working from home, shortage of raw materials or critical parts prompt service providers to re-schedule delivery dates, refrain from new initiatives, and take a wait-and-see approach to unfolding events. Companies hold off on investing in plant, equipment, and infrastructure to save cash for rainy days. On the other hand, service jobs in construction, hospitality, and tourism see a reduction in demand. On the asset-side; pension funds, stocks and bonds decline in value, thus hitting profitability and wiping off accumulated wealth.[13] Central banks and government ministries rush to roll out stimulus measures to contain the damage, the UAE having contributed $70 billion[14] and Saudi Arabia $32 billion.[15]

Finally, in conflict regions, prospects for resolution seem as distant as ever, but fortunately there is relative calm to be hopeful for and to serve as a catalyst for regional diplomacy.[16] What impact the pandemic will have on an array of wars rolling in the region is unknown. Regional rivals Iran, Israel, Saudi Arabia, and Turkey all appear to crumble under the distress and focus inward while proxy wars continue after short-lived ceases fires in Libya and Yemen. The calamity caused by severe market disruption, instability, and social chaos creates a window of opportunity to re-energize UN-led peacemaking missions and at least pause the high intensity conflicts in Syria, Libya and Yemen.[17] The UAE, for instance, took the lead to cite "founding humanitarian principles" to extend medical aid a much needed time to Iran, as a sign to ease tensions across the Gulf region.[18]

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12 CNBC, *"Saudi Arabia Announces $32 billion in emergency funds to mitigate oil, coronavirus impact,"* March 20, 2020 2020 (accessed April 6, 2020); available from https://www.cnbc.com/2020/03/20/coronavirus-and-oil-saudi-arabia-announces-32-billion-stimulus.html.

13 *Neden?,* "Koronavirüs," Prof. Dr. Erhan Aslanoğu (Haber Global, İstanbul, 2020) 21:00; available from https://haberglobal.com.tr/program/neden.

14 Bangkok Post, *"UAE doubles stimulus to counter coronavirus impact,"* April 5, 2020 (accessed April 6, 2020); available from https://www.bangkokpost.com/world/1893575/uae-doubles-stimulus-to-counter-coronavirus-impact.

15 CNBC, *"Saudi Arabia Announces $32 billion in emergency funds to mitigate oil, coronavirus impact,"* March 20, 2020 2020 (accessed April 6, 2020); available from https://www.cnbc.com/2020/03/20/coronavirus-and-oil-saudi-arabia-announces-32-billion-stimulus.html.

16 Al-Monitor, *"How the pandemic, plummeting oil prices could reshape the Middle East,"* Week in Review, April 3, 2020 (accessed April 5, 2020); available from https://www.al-monitor.com/pulse/home.html.

17 Ibid.

18 Al-Monitor, *"The Takeaway: March 18, 2020,"* March 18, 2020(accessed April 5, 2020); available from https://www.al-monitor.com/pulse/originals/2020/03/the-takeaway-march-18-2020.html.

4. Conclusion

The Covid-19 outbreak brought world-trade almost to a grinding halt as countries adopted unprecedented measures to stop spread of the pandemic. To counter its impact, governments necessarily took bolder steps to implement social-distancing rules, to scramble the health sector, and to turn the market sentiment. Gulf monarchies have strong war chests to shoulder the burden, thanks to oil windfalls and thick sovereign wealth funds, but this is not a *carte-blanche* for indefinite expansion. Global demand has weakened, and supply chain links are broken, so bar any significant increase in consumption, the resultant oil glut from the collapse of OPEC+ talks will hit back at Gulf monarchies forcing a severe market correction.

Other Middle Eastern countries such as Turkey, Iran, and Egypt have their own economic woes to varying degrees that makes it harder to wave off an impending global contraction. Tourism, construction, logistics, and catering sectors are most vulnerable to regional and international factors due to heavy reliance on material support, customer sentiment, and government spending. Governments have plenty of space to intervene in terms of fiscal stimulus, regulatory arrangements, and benefits to instigate confidence, mitigate financial impact, and boost demand in most affected areas in industries. The key is to cooperate with each other in a common endeavor and release a tailored package to each sector's case rather than adopting a piece-meal approach for the economy overall.

NEW CORONAVIRUS DISEASE: FROM THE BIOLOGICAL WARFARE PERSPECTIVE

Prof. Dr. Levent KENAR

Biological warfare is the use of living microorganisms or materials derived from them (toxins, genetically modified organisms) for military or terrorist purposes to cause death or incapacitation in man, animals or plants. The deliberate use of microorganisms and toxins as weapons has been attempted in various periods throughout history (Table I). Many biological agents including bacteria, viruses and toxins shown in Table II can be used as biological weapons which have emerged as significant threat in the last decade and their uses in future wars and terroristic attacks still remain a realistic concern. Since having biological warfare program is still currently threat and our country is located in the "hot region" of this program, this issue has to be taken into consideration with great extense.

Table I. Historical use of biological weapons:

- Tatars attempted to infect the enemy by catapulting bodies infected with bubonic plaque over the walls of the city of Kaffa-Kırım (1346).

- As an "act of good will", the British soldiers gave blankets used by smallpox victims to the Native Americans (1754).

- On 17 June 1925, the Protocol for the Prohibition of the Use of Bacteriological Methods in War, commonly called the Geneva Protocol, was signed.

- At least ten thousand prisoners died and 11 Chinese cities were attacked with biological agents manufactured in a biological warfare research facility in Pingfan, Japan (1932-1945).

- US started to conduct a biological warfare program in 1943 in Camp Detrick, Maryland and made research on anthrax, brucellosis, Venezuelan equine encephalitis, Q-fever, botulism and tularemia until 1969.

- Thousands of people were reported to be killed due to attacks of Tricothecene mycotoxins known as Yellow Rain in the war in Southeast Asia (1974-1981).

- As a follow-on to the 1925 Geneva Protocol, the 1972 Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological and Toxin weapons, commonly known as Biological Weapons Convention was convened.

- A Bulgarian exile named Georgi Markov was attacked in London with an umbrella weapon filled with Ricin (1978).

- A mysterious explosion at the Soviet Institute of Microbiology and Virology in Sverdlovsk caused at least 66 persons to die (most with inhalation anthrax) (April 3, 1979).

Table II. Some types of organisms having potential biological warfare applications.

A. Bacteria:

Bacillus anthracis

Brucella abortus, B. melitensis, B.suis

Chlamidia psittaci

Clostridium botulinum, C. tetani

Francisella tularensis

Pseudomonas mallei

Salmonella typhi

Shigella dysenteria

Vibrio cholerae

Yersinia pestis

B. Rickettsiae

Coxiella burnetii

Rickettsia prowasecki, R. rickettsii, R. quintana

C. Viruses

Congo-Crimean haemorrhagic fever virus

Venezuelan equine encephalitis virus

Lassa fever virus, Ebola virus

Dengue fever virus

Variola virus

Yellow fever virus

D. Toxins

Botulinum toxins

Clostridium perfringens toxins

Ricin, Saxitoxin

Staphylococcus aureus toxins

Trichothecene mycotoxins

Aflatoxins

E. Genetically Modified Microorganisms or genetic elements **that contain nucleic acid sequences associated with pathogenicity and are derived from organisms.**

Because of the characteristics and variabilities of biological weapons, no accurate preventive measure can be stated in practice at all. However, biological defense includes some measures minimizing the threat and the effects of biological attack which need to be planned and organized as summarized in the following:

1. Developing an effective intelligence system and information network: Follow-up of the countries likely conducting a biological warfare program and evaluations of health statistics and epidemiological data in a certain area should be such a warning and alerting matters to lead the State and public to be prepared for such an attack.

2. Quarantine and isolation: A detailed quarantine policy and controlling mechanism is a great concern for the government in peace time. Isolation methods like protective equipment and collective protection systems including shelters should also be developed and established.

3. Improvement of rapid and advanced diagnostic systems and facilities: Biosensors and fully automated biodetectors for real time sample collection, detection and identification in the field have been developed. On the other hand, a miniature flow cytometer (known as miniFlo) using an immunoassay system and a portable PCR identifying the DNA inside the cell are also available for the detection and identification of biological warfare agents.

4. Improvement of prevention and treatment protocols and facilities including vaccination: Since biological agents are not only easy and cheap to be produced, but also difficult and expensive with respect to prevention and treatment, more appropriate method for reconnaissance and treatment including isolation procedures, antibiotic therapy, antiviral therapy, antitoxin therapy and vaccination has to be determined, and researchs have to be performed in coordination with the mentioned requirements.

5. Effective health organization and training: Organizations and institutions related to the Biological Defense System should be determined and integrated to the system with the establishment of coordination amongst them. Diagnostic facilities and laboratory services including on-site sampling and sample transportation should be developed by some certified health care providers.

New Coronavirus Disease

The COVID-19 virus, which appeared in Wuhan, China in December 2019, has spread rapidly all over the world. As of 21 April, 2020, when these lines were written, the virus diagnosed in more than 1,5 million patients in 210 countries worldwide caused more than 175 thousand people to die. While the outbreak of China was relatively relieved, the focus was on Europe since February. With March, the number of cases in the United States (USA) began to increase rapidly. Curfews have been organized in many countries, especially in England, Italy, France, and Poland, in order to struggle with the epidemic.

Realizing that the virus has the characteristics of “human-to-human” transmission capability, World Health Organization stated the disease as a Public Health Emergency of international concern on January 31, 2020. These findings were much enough to demonstrate the severity and complexity of the outbreak. Given the fact that no effective medicine is available for viral infectious diseases, some other remediations including preventive measures like control of the source of infection, early detection of patients, cutting off transmission, and protecting susceptible population are essential. Although medical institutions and healthcare

staff are the main force fighting the disease, public contribution is also mandatory for a rapid epidemic control.

Figure:

The survival time of the novel coronavirus at different environmental surfaces with different temperatures is as in the list:

Different environments	Temperature	Survival time
Air	50 ~ 59°F	4 hours
	77°F	2 ~ 3 minutes
Droplets	<77°F	24 hours
Nasal mucus	132.8°F	30 minutes
Liquid	167°F	15 minutes
Hands	68 ~ 86°F	<5 minutes
Non-woven fabric	50 ~ 59°F	<8 hours
Wood	50 ~ 59°F	48 hours
Stainless steel	50 ~ 59°F	24 hours
75% alcohol	Any temperature	<5 minutes
Bleach	Any temperature	<5 minutes

Virus generally can survive for several hours on smooth surfaces. If the temperature and humidity permit, they can survive for several days. The novel coronavirus is sensitive to ultraviolet rays and heat. Sustained heat at 132.8ºF for 30 minutes, ether, 75% alcohol, chlorine-containing disinfectants, peracetic acid, chloroform, and other lipid solvents can effectively inactivate the virus.

With respect the risk management, winter is the season having tendency to see the high prevalence of respiratory viruses such as influenza, and various other respiratory infections that may occur. This made it difficult to differentiate the early stage of COVID-19 from other upper respiratory infections. The main sources of infection in community-acquired pneumonia include patients, their families, visitors, and their living environment. The dissemination and outcomes of community-acquired pneumonia are associated with the following factors.

(1) Environmental conditions: air pollutants, overcrowding in confined spaces, humidity, indoor hygiene, seasons, and temperature.

(2) Accessibility and effectiveness of health care services and infection prevention measures: Accessibility and availability of vaccines and health care facilities, and isolation capabilities.

(3) Host factors like age, smoking habits, transmissibility, immune status, nutritional status, previous infection or co-infection of other pathogens, and overall health.

(4) Pathogen characteristics: routes of transmission, infectivity, virulence, and microbial population.

Some main Recommendations to keep ourselves away from the novel coronavirus	(1) 2019-nCoV is mainly transmitted by droplets and contacts, therefore medical surgical masks must be worn properly. (2) When sneezing or coughing, do not cover nose and mouth with bare hands but use a tissue or a mask instead. (3) Wash hands properly and frequently. Even if there are viruses present on hands, washing hands can block the viruses from entering respiratory tract through nose or mouth. (4) Boost your immunity, and avoid going to crowded and enclosed places. Exercise more and have a regular sleep schedule. Boosting your immunity is the most important way to avoid being infected. (5) Be sure to wear the mask always! Just in case you come in contact with an infected person, wearing a mask can prevent you from inhaling virus-carrying droplets directly.

The exceptionally high rate of spread of the COVID-19 epidemic and the mortality rate, especially among people with a history of elderly or chronic disease, brought the health system of many countries to the side of collapse. Another factor that increases the severity of this situation is the increased risk of healthcare professionals who are in need of dealing with a very large number of patients in a short time. As a matter of fact, a large number of medical personnel died in Italy and China during the fight against the epidemic. The epidemic has ceased to be only a public health issue in a very short time: the crisis management capacity of governments

has gained long-term effects and long-term effects in many areas such as national and international economy, trade and security.

Italy is one of the countries heavily affected by the epidemic. The number of patients, which showed a large increase in a short time, paralyzed the Italian health system. Due to this situation, medical equipment, materials and personnel assistance from different countries were sent to Italy, which requested assistance from the international community. One of the countries sending aid was Russia. However, the content of the aid and the way it was reflected in the press seemed to herald the transformation of defense and security issues in the world after COVID-19.

From March 22, Russia started to Italy for heavy transport aircraft and military medical personnel specialized in sanitary materials, decontamination devices, diagnostic kits and anti-virus and epidemics. These staff, along with the Italian armed forces and paramedics, started the aids to the sites movement, which were most severely affected by the outbreak.

Similarly, the security of army units of countries such as England, USA, Germany, first aid, field hospital, patient and material transportation. The US Navy sent two floating hospital ships off COVID-19 New York. The French Navy also used the Mistral-class helicopter landing ship COVID-19 to evacuate patients from the mainland.

At least, when the disease first appeared in January, no one predicted that it would have had as much of an impact as it is now seen because the initial data and initial information from China was not very healthy. In other words, the seriousness of this business was understood as it came to the center of Europe a little like the end of February and then after the epicenter jumped to the United States, and the economic shock started to become more obvious after this stage. It was a rare shock in world history. The crisis we are experiencing now actually reflects and reflects the great shock of this economic imbalance. We are experiencing one of the periods in the first quarter of the year in terms of growth or in the first half of the year, when the global economy is shrinking sharply.

Even the estimates will be higher than the contraction. In some places there are places where people are not able to do even if there is demand because work is not possible due to health work, because it is in some areas such as some basic food, medicine, etc. It is necessary to disappear gradually only with a relief on the health side.

It is not possible to know exactly the economic damage of the coronavirus pandemic. But, it is possible to make some predictions, if not possible. Even if the measures taken are

taken into consideration, it is becoming increasingly clear that the world will suffer more seriously than during the financial crisis between 2007-2009. The result is: when people lose their jobs, they consume less goods and services. Thus, the economy weakens. As the idea suggested, workers this year ranged only from $ 860 billion to $ 3.4 trillion. They can lose their income from labor, prolonging the negative effects of the current recession and the deepening of the crisis may occur.

In the light of these foresights , possible developments and transformations that may occur in the defense and security environment after COVID-19 can be said in the following:

1. The strategic - political importance of the armed forces in the "non-war operation" (Operation Operations) missions was once again demonstrated. "Semi-diplomat" can be expected to give special importance to educational promotion, diagnosis and preferences.

2. In this direction, transport aircraft that can carry large loads over long distances, large-capacity military transport and hospital ships; More resources can be allocated for the development, production and modernization of existing sanitary infrastructure, hospitals and similar tools and equipment that can be quickly transferred and installed quickly in field conditions.

3. COVID-19 can be allocated larger resources to military and civilian research projects in genetics, microbiology, nanotechnology to combat viruses. It is possible that the activities that can increase in these areas will have side outcomes in the military and civilian areas in the medium and long term.

4. The assistance provided by Russia and China to European countries in the context of combating the epidemic, military and civil diplomatic relations established before, during and after these aids can trigger transformation and changes in European geopolitics.

What is expected in the near future:

- More cases are likely to be identified in the coming days, including more cases in the world.
- It's also likely that person to-person spread will continue to occur, including in the most affected countries.
- Widespread transmission of COVID-19 in the world may occur through large numbers of people needing medical care at the same time.

- Schools, childcare centers, workplaces, and other places for mass gatherings may experience more absenteeism.
- Public health and healthcare systems may become overloaded, with elevated rates of hospitalizations and deaths.
- Other critical infrastructure, such as law enforcement, emergency medical services, and transportation industry may also be affected.
- Health care providers and hospitals may be overwhelmed.

Deglobalization or Reglobalization?

Dr. Abdullah ALTUN

Until the recent corona virus outbreak, such a situation can only be occurred in movies having well-written scenarios. Although there are many simulations for possible pandemics, the world seems not well prepared. That is, this outbreak is much beyond available predicted scenarios. Regarding the level of social and economic isolation caused by corona virus outbreak, whether this is the end of globalization (deglobalization) appears as an important question. However, from a different point of view, this process has some consistent features with the third great unbundling. Third great unbundling is not a deglobalization, rather it may be a reglobalization process with a different algorithm from ordinary globalization. Thus, whoever wants to understand the possible effects of this outbreak on economy shouldn't confine or limit his/her mind with certain ordinary understandings of the contemporary world.

Deglobalization

According to some views, this outbreak is the latest movement of one of the main parts of the economic wars. At first, some conspiracy theorists directly blame the USA for the corona virus outbreak in China. These views changed after the spread of the corona virus around the globe, mainly in the USA and the European Union, especially when China started to end lockdown and to return to normalcy. Thus, whether this outbreak is a counter attempt of China arise as an alternative argument for some conspiracy theorists, as well.

When trade wars first begin, main argument is the trade deficit of the USA with China. But leading economists emphasize that this deficit is in gross terms. Regarding the global value chains, exports of countries include value added of many others even more than domestic value added. A gross trade deficit between two countries means value added trade deficits with many countries. Thus, the trade deficit between the USA and China is much lower in value added terms. Then, another argument appears as a reason for these economic wars: the changing role of China in the global economy. China's increasing outward foreign direct investment is one of the important signs of this change. But much important signs are radically increasing intellectual property rights and step by step increasing exports of royalty and licenses. China is account for the half of the all patent applications in 2018 according to the 2019 report of the

World Intellectual Property Organization (WIPO). As a result of the above reasons, we witness a considerable increase in protectionist sentiments in last years.

Regarding the protectionist sentiments as a result of the economic wars people start to think that there is a deglobalization process, when they see the isolation and the closing borders of countries due to COVID-19 pandemic. An important point is that the protectionist sentiments are also available after the 2008 crisis. That is, world has been witnessing a halt in production fragmentation, especially after 2011. The production fragmentation is the main characteristics of the second great unbundling. As a result, the world economy gives some signs of going somewhere else from the second great unbundling.

Reglobalization

I want to start with a question: Are protectionist sentiments tools for breaking the available global value chains in order to access a new algorithm for globalization? To discuss this part, I want to focus on the concept of third great unbundling[1]. The first great unbundling was the separation of the production and the consumption (19^{th} century). The second great unbundling was the fragmentation of production (the rise of global value chains after 1990s). Third great unbundling is the separation of workers and machines. Regarding the third great unbundling, machines will be controlled by workers without physical presence of workers. Another important dimension of this unbundling is the robotic machines. We may witness the transformation of ordinary machines into robots by the 5G, big data, machine learning, internet of things (IoT) and Industry 4.0. Of course, artificial intelligence is in the core.

What is the relationship between third great unbundling and corona virus?

From one point of view, the corona virus will accelerate the transformation from the second great unbundling to third great unbundling. Table 1 summarizes the algorithms of these two great unbundlings. The corona virus outbreak results in closing borders and stopping flights. However, shipping trade is not as vulnerable as flights in this high level of isolation. It can be expected that shipping trade may return to normalcy easier than flights. This means less

1 See Richard Baldwin's two important articles: https://www.economist.com/finance-and-economics/2007/01/18/the-great-unbundling & https://harvardpress.typepad.com/hup_publicity/2016/11/globalizations-three-unbundlings-richard-baldwin.html

movement of human resources and consistent with the separation of workers and machines expected by the third great unbundling.

The effort of North for making radical innovations or redefining available products by incremental innovations to restructure value chains (breaking the available chains for constructing new ones) may be in the core of this transformation. Especially, to sustain the leading position in the knowledge economy and to be able export royalty and licenses have specific significance to be able to construct or transform value chains. But just redefining a product may not enough for triggering demand for it. The cultural value chains play vital roles in changing consumer preferences. Despite such a level of isolation in every place, people are in very connected by the online environment. Thus, cultural value chains are still very active by the online tools. From a point of view corona virus outbreak is the breaking point between this transformation. See Table 1 for more details about the second and third great unbundlings.

Before finishing to discuss alternative scenarios, it is necessary to state here that such a pandemic, whether man made or not, is a really huge problem for humanity. Thus, all nations should work together for fighting against this virus.

Table 1. The Algorithms of The Second and The Third Great Unbundlings

The Algorithm of The Second Great Unbundling	The Algorithm of The Third Great Unbundling

• The North (developed countries) make foreign direct investments in South (developing countries)
• These foreign owned enterprises (mainly entities of The Multinational Enterprises (MNEs))
  ○ Make royalty and licenses payments to North countries for production
  ○ Import capital and intermediate goods from the North countries.
  ○ Value added from various source countries is imported for making production (production fragmentation or production sharing)
• These products
  ○ can be Imported by the North Countries from the producer South Countries
  ○ can be sold in domestic markets of the South
  ○ can be exported to all other countries
• The movement of the human resources around the globe for the cross country economic and trade relations (mainly flights)
	• Domestic production instead of the production fragmentation (both North and South)
	• The effort of North for making radical innovations or redefining available products by incremental innovations to restructure value chains (breaking the available chains for constructing new ones)
	  ○ To sustain the leading position in knowledge economy and to be able export royalty and licenses are among main points to construct or transform value chains.
	• The North wants to be the main seller of the capital goods and intermediate goods again by sustaining the leading role in science and technology.
	  ○ Although each individual economy can domestically produce its products, where they will buy the capital goods and intermediate goods for these productions is important question. If the North can sustain its leading role in selling the capital and intermediate goods, the rising domestic productions mean the rising gain for the North in a different algorithm.
	  ○ The capital goods will be much automated products and even we may witness the big transformation of the machines to robots. Whoever has this technology wants to gain from royalties and export such capital goods to gain more.
	• Less movement of the human resources due to robotics machines and distance controlling of the machines (even

• The movement of the goods (mainly by the shipping trade)	accessories can be produced in 3D printers by distance access) (mainly related with flights) • The movement of the capital and the intermediate goods (mainly related with the shipping trade)

CORONAVIRUS vs. CLIMATE

Fatih Temiz, MSc.

The Prequel

Although it looked like a local problem that was born in Wuhan, China, the new form of the coronavirus Covid-19 spread like wildfire across the globe. The total number of coronavirus cases is nearing 3 million (April 24, 2020) and unfortunately, the death toll is almost 200,000.

The virus is thought to have originated in a wet market in Wuhan. Wet markets are popular and common in East and Southeast Asia. The problem is not the market itself but the vendors that sell live wildlife for human consumption. Covid-19 is theorized to have been transferred from bats to pangolins, and from pangolins to humans via consumption.

Consumption of wildlife, or bush meat, occurred in China historically. However, the Great Leap Forward years saw mass starvation of people and causing somewhere between 16 and 45 million deaths. During this period people ate anything they found like sawdust, soil, and rotting meat. Dogs, cats, and even the national gem the giant panda were eaten. Also, some animals were seen as pests such as the sparrows, and these birds were decimated which later on brought large numbers of vermin eating the crops (swarajyamag.com). The great famine years made people realize that these methods were not sustainable.

Ongoing Effects

The shops, restaurants, cafes and some other stores are closed. The supply chain has come to a halt. People working at these businesses are staying at home.

The planes sit and wait. Almost all countries have closed their borders. No people from abroad are allowed inside anymore. Also, the vast majority of internal flights are cancelled. Tourism and tourism industry are hibernating.

Home-office working has become a widely accepted reality. Some companies put their workers on a cycle and only a fraction of their workforce are present at the work place at a given time. These people stopped commuting. Inner city buses, metros, trains etc. run far less frequently.

Children are now home schooled. Distant education is provided from TVs and via the internet. Millions of young citizens do not go to their schools or their sport, music or other art events.

The result of this change of habits brought demand for oil to a vast decrease. Smog levels dropped as combustion engines are parked at their garages.

A striking example of air quality increase can be seen in the photo below. The left side of the photo is from November 2019 and the right side of the photo was taken in March 2020 in India. The three week long lockdown brought down the hours of unhealthy pollution levels to a mere quarter of the previous times. Seoul in South Korea experienced a drop of more than by half in in PM2.5 levels. In Wuhan the air quality increased by more than 40% (cnn.com).

Image: Air pollution in New Delhi, India, November 2019 vs March 2020 (cnn.com)

Impact on the climate change

First of all, the optimist approach tells us that people learnt how to deal with a global crisis and can actually act upon it when need be.

- Less food is wasted.
- Local consumption is higher.
- Commuting is less and companies could possibly continue having their employees continue working from home.
- The response to the Covid-19 pandemics happened within weeks, this passion can be called upon the response to climate change.
- A carbon neutral future can be built.
- The flaws in our economic system can be fixed (news.yahoo.com).

On the contrary, the pessimist thought brings the worries of reduction in investment in greener energy sources as the economies shrank and less funds are diverted towards this cause. The climate change will not happen tomorrow or the day after; this limits the public response as things happen gradually.

- More immediate actions can be favored rather than long term.
- The politicians in the world acted slowly upon the pandemics i.e. a bad sign for the future.
- Polluting industries may receive the larger chunk of stimulus funds.
- Emissions will be back to their "normal" levels as soon as the lockdowns end.
- The public saw the imminence of the pandemic, yet the climate change is taking place slowly but surely (news.yahoo.com).

We are yet to see the whole effects of the climate change. Scientists advised us to take action for many years. The recent responses we gave to the pandemic made it indisputable that we need to be in the middle of the crisis to act upon. Moreover, there is one positive point to this – we still have some time to act (nbcnews.com).

Conclusion

Although we have been warned about the climate change for many decades, we have been reluctant on reacting. We saw a rapid decrease in the demand for oil in the general industry (due to shut down factories and diminished demand for goods), in the transport sector (due to travelling limitations and halted commuting), in tourism, and other related sectors. This slowed trend does not look everlasting and as the limitations and lockdowns end, eventually, the humanity will go back to its "normal" times and start polluting again.

However, the global awareness and most people's readiness and willingness to isolate themselves and start living at a slower pace give hope for the future. Perhaps, when the climate change shows itself before our eyes by leaving no way for denial, although it would be too late to cancel out all the bad results of the change, we might still reverse some deadly effects.

REFERENCES

1. *What Links Chinese Wet Markets to Mao's Great Leap Forward? Communist Pseudoscience That Caused Famines, Killed Millions*, Mar 24, 2020, https://swarajyamag.com/news-brief/what-links-chinese-wet-markets-to-maos-great-leap-forward-communist-pseudoscience-that-caused-famines-killed-millions
2. Helen Regan, *Air pollution falls by unprecedented levels in major global cities during coronavirus lockdowns*, April 23, 2020, https://edition.cnn.com/2020/04/22/world/air-pollution-reduction-cities-coronavirus-intl-hnk/index.html
3. Mike Bebernes, *What impact will coronavirus have on climate change?*, April 1, 2020, https://news.yahoo.com/will-coronavirus-help-or-hurt-the-efforts-to-curb-climate-change-205902702.html?guccounter=1
4. Adam Frank, Coronavirus and climate change: The pandemic is a fire drill for our planet's future, March 27, 2020, https://www.nbcnews.com/think/opinion/coronavirus-climate-change-pandemic-fire-drill-our-planet-s-future-ncna1169991

CORONAVIRUS PANDEMIC & CHANGES IN GLOBAL BALANCES

Oğuzhan Akyener & Sezayi TOPRAK

The Coronavirus pandemic, which started in China and continues to spread all over the world, affects everything from individuals, states to the international system in an unpredictable extent. Beyond the real health dimension, it creates a perceptual fear climate, brings life to a halt with its high contagiousness feature, prepares the globalization principle with a new framework with the integration of new technologies and can be considered among the macro-level pains of the new world order that we have been heard since the early 2000s can be acceptable as biological risks. As it is progressing with an uncontrolled reality that upset the predictions, it can also offer new opportunities in the crisis environment it creates.

Of course, in this process, it is necessary to make the differentiation between crisis and opportunity very carefully, to be successful at least for some predictions when designing the opportunity moves, to define current circumstances appropriately, and have some capabilities for motion ability.

The direct and indirect effects of the Coronavirus, which was perceived as a local flu epidemic at the beginning of 2020, but has now become the biggest calamity for the whole world, arouses curiosity.

Giving the answers needed to overcome this curiosity is very difficult because of many unpredictable factors, it will be more appropriate to start with the analysis starting from its economic effects rather than health effects.

As is known, as a result of the perceptual fear climate created by the Coronavirus, there has been a great decrease in demand in many real sectors due to the fact that life has come to a halt. In addition to oil, transportation (land-air-sea), tourism, automotive-centered production and logistics sectors, huge losses have occurred in the service sector in almost all aspects. The global economy has already shrunk by 15 to 20% compared to ordinary conditions. In the period since the 2nd week of February, more than $ 26 trillion of money has been outflowed from global stock exchanges. In the markets such as FTSE, Dow Jones and Nikkei, around 30% losses were experienced.

The states try to realize below, while the growth targets and steps in this direction are taken to the second plan:

- Health policies for individuals,

- Social supplements,

- Financial support packages,

- Prevention mechanisms to prevent bankruptcy of institutions,

- Financial or perceptual attempts to reduce the effects of the crash in the markets.

While recession estimates have been proposed for many states all over the world, the US, EU and IMF have started to disclose some precautionary strategies affecting the global markets. First of all, the FED's interest rate reduction and markets (unlimited, depending on the place)

will be paid, and Trump's disclosures regarding the $ 4 trillion additional package mechanism have led the process to a short-term perceptual reversal. In this context, the biggest economic incentive package of US $ 2 trillion prepared due to the coronavirus pandemic passed through the Senate and House of Representatives and approved by Trump.

In the 2008 crisis, the US pumped around $ 8 trillion to the markets. However, it was the fund needed to reverse the process for that period! However, in the current situation, although new money inflows to markets have been positively received in many stock markets and started the upward trend in the stock markets, this will not be able to prevent demand contraction!

In the middle term, there will be re-ballooning with low interest loans, inflation that cannot be prevented and other economic risks. Of course, fund is still required to lower a recession trend. The important thing is how to use this fund effectively and make it available to the right institutions and individuals.

The main issues to be considered in process management are such as:

- Achieving the number of cases that will not exceed the capacity of the health system thanks to the isolation, and thus keeping the process manageable,

- Trying to establish balance by preventing big breakdowns with economic packages during the isolation period,

- Ensuring the sustainability of medium and long term supply and demand by trying to keep the institutions alive,

- In this way, trying to prevent permanent unemployment and bankruptcy,

- Managing the process without falling into an atmosphere of fear and chaos,

- Establish social awareness of CBRN and biological threats right now (because the risk of CBRN seems to continue increasingly)

- Making financial support packages available to the right people and companies,

- Evaluation of international investment opportunities with all additional financial packages and making moves that will save the country in the long term (particularly oil sector),

- Establishing strategies that will make global breakthroughs in the period when the pandemic will recede, for the “process with high levels of liquidity” that will be created by the new financial spiral that many different institutions and banks pump to ease the markets (Note: China has started this process faster than any other country!),

- Developing some strategies for the states that may be bankrupt in this process (such as possible changes in the Iranian and Venezuelan governments), taking measures against possible risks and evaluating opportunities.

- Preparing action plans to reduce the heavy burden on the banking sector in the post-crisis period.

Of course, since it is not clear how long this process will take, there may also be risks in the management of the forecasts made, the measures taken in the light of these predictions, and the possibilities and capabilities. Issues such as creating certain levels of social immunity against the epidemic, controlling the rate of spread, determining the number of cases correctly,

managing quarantine processes, developing vaccines or drugs are other issues that are difficult to predict in planning processes.

There is no doubt that those who will be able to collect the newly emission money and the shares of the company, whose share value has fallen from international stock exchanges, will be the most profitable groups. At this point, all parties are trying to turn the crisis into an opportunity. For this reason, by throwing inflation accounts aside, the multidisciplinary trade wars that spread to the global scale with its new style continue in the foggy environment created by the perceptual fear climate. Although many theories trying to define the international system remain sterile in the analysis of the process, the new world order model is constantly evolving with the different initiatives of many actors and continues to flow to different points at unpredictable dimensions with new touches at every moment.

Although these macro-level theories suggest conspiracy-like discourses such as "third world war", "the process ruled by global secret forces with extraordinary realization", "a new world order from scratch", the picture should not be considered as simple. Because there are many power balances in the world and the process is so complex and dynamic that none of them can manage alone. To give some current examples,

- It is certain that Trump will already receive the elections. However, it is also possible that he will lose votes in this difficult period until the election. Trump's competitors will use this process against him. Especially, many families known as global finance barons are accepting the Trump administration and the already active nationalist military groups in the US as a threat, and while supporting Trump's rivals, this struggle will be apparent more.

- The families who want to overthrow Trump in the USA will want to complete this process with maximum profit by making the changes they want in Europe.

- In addition to these moves, relevant global financial barons will also collect shares of strategic institutions and companies in the US, Europe, China and other strategic countries with affordable budgets due to the crisis and they will try to be more effective - richer.

- In this way, their activities on China will increase.

- The fact that China and the US, which had already retreated as a result of Trump's moves before the virus epidemic operation, tended to soften in the trade wars, disturbed the global financial barons.

- Thanks to this global virus crisis, it will be predicted that they will try to achieve opportunities that can reach their different goals in many parts of the world by providing multi-dimensional gain.

- On the other hand, China, Germany, Spain, Italy, Iran and France will support this process against Trump, and at least they will want it.

- On the other hand, the Trump administration will prepare the ground for the weakening of China and make the US to control the money on a global scale.

- At the very beginning of this process, with Brixit, Britain will continue to pursue a diplomacy that seems to be parallel to the place with the EU, China and global money barons, simultaneously, which will not stand up no one.

- Russia will try to fill all the gaps arising from the US and China by taking advantage of this chaos.

- In this process, Trump will continue to try to change the Iran and Venezuela governments, which have been seriously hurt by the oil prices. And maybe he will be successful.

- Turkey will take the necessary steps to become more active in the region, benefiting from all the space of global power, and keep up with civilization oppressed geography to find a solution to regional problems.

- Some groups who want to overthrow the current government in Turkey, will watch his opportunity to play with the perception that the process is not well managed and elections took place in much worse scenario, like Trump example.

- Germany will continue to deal with the problems of the EU without putting too much strain on it, while France will continue its efforts to construct military models independent of NATO.

Therefore, as can be seen from these examples, everyone will try to use the crisis as an opportunity. Having someone take opportunities and profit from this crisis will not mean that they have caused this crisis. On the other hand, Muslims will be the least affected demographically, and thus the most profitable religious group. But the probability of a Muslim structure behind this crisis is zero. So it makes more sense to develop comments on probabilities rather than inconsistent conspiracy theories. On the other hand, the group most likely to have started this process is undoubtedly global financial barons! With this perception that the US co-determination-oriented policies in accordance with certain common interests of Russia and even Turkey instead by in some cases will even be possible. Of course, different situations will not mean that the related structures cannot cooperate with global financial barons for their common interests in different fields. Because states can both conflict and cooperate simultaneously with their allies or the states that they see as threats in line with their different interests! This is the unchangeable rule of global politics! For this reason, open doors should always be left in conspiracy theories and besides, some common decisions should now be made for the future of humanity. Turning this global crisis into an international cooperation environment would be the biggest slap to hit all groups that started this crisis! For this, international structures such as the UN should now be revised by adopting a fairer, more effective and more participatory model. Because the current functions and position of the UN, which was created to prevent a new world war, do not have the qualities that will eliminate the risks of today's world. At this point, it is important to understand the understanding of "the world is bigger than five" by all states and to re-model the UN!

It is an inevitable truth that our world will deal with more biological attacks, CBRN threats and outbreaks in the future. Coronavirus is also very likely, a project of some global money barons planning the process in advance! However, rhetoric such as all control is in their hands, is absolutely not true. Undoubtedly, they also have many breaking points and weaknesses among themselves, and perhaps two generations later, none of them will exist. As stated above, there are many factors that can change the balances in the international system, and sometimes unexpected actors get opportunities to manage the table.

Turkey which followed this hazy process very well since the beginning (take quick decisions, the ability to move applications, new risk management approach, with different international integration initiatives) managed the process very well and it focused on the moves to turn the

crisis into an opportunity. So I hope that Turkey which is on the side of world peace and the oppressed will come out stronger from this process. For this, it is essential social support, national unity and togetherness, and to help the state with patience and diligence as much as possible in the implementation of the macro-level objectives of the state but not fear scenarios!

It should not be forgotten that in such a process, even a simple “stay at home” practice can become an action that can indirectly change many balances at the macro level!