

Preliminary Economic Indicators Of The Novel Coronavirus (2019-nCoV) Pandemic Revisiting Asian Disease Problem

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ABSTRACT

It is surely beyond doubt that novel coronavirus (2019-nCoV) has left its mark in history. The number of infected people has been increasing every single day because of the rapid rate of spread. The outbreak is at the top of both national and international agendas. However every agent is caught unprepared and there is still no certain cure. Outbreak has already economic, political, sociological, psychological and also environmental consequences. The aim of this paper is to reveal preliminary economic indicators of the novel coronavirus (2019-nCoV) outbreak in order to shed light on future research. As the outbreak induced the ethical issues to be questioned, the paper revisits Asian Disease Problem which examines the importance of framing effect in decision-making processes.

Keywords: *Coronavirus, Asian Disease Problem, Rationality, Climate Change, Framing Effect.*

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INTRODUCTION

A pneumonia outbreak of unknown etiology appeared in Wuhan, Hubei province in China, spreaded quickly nationwide in the late December 2019 and is identified as a novel beta-coronavirus called 2019-nCoV by Chinese Center for Disease Control and Prevention (Gorbalenya et al. , 2020; Xie and Chen, 2020). Coronavirus family (CoV) is known to cause Severe Acute Respiratory Syndrome (SARS-CoV) and Middle East Respiratory Syndrome (MERS-CoV) (WHO, 2020a; Xie and Chen, 2020; Yüzbaşıoğlu, 2020). WHO announced a name for the new coronavirus disease: COVID-19 on the 11th of February 2020 and finally revealed it as “pandemic” on the 12nd of March (WHO, 2020b, 2020c). Highlights from the 31st of December 2019 to the 20th of January 2020 are listed below(WHO, 2020d):

- China Country Office of the WHO is informed about pneumonia cases in Wuhan City Hubei Province on December 31, 2019.
- WHO is informed that the outbreak is related to a seafood market in Wuhan City on January 11 and 12, 2020.
- A novel coronavirus is detected by the authorities of China on January 7, 2020 and the genetic sequence is shared in order to develop diagnostic kits on January 12, 2020.

Although dry cough, tiredness and fever are reported as the most common symptoms of COVID-19; some patients are observed to have sore throat, nasal congestion, aches, pain, diarrhea or running nose while some doesn't develop any symptoms and doesn't feel sick (Yüzbaşıoğlu, 2020). Cough, breathing difficulties, shortness of breath, fever, respiratory symptoms, kidney failure, severe acute respiratory syndrome and pneumonia are reported as the signs of the infection (WHO, 2020e). WHO announced that (WHO, 2020f):

- 80% recover without needing special treatment,
- around 1 out of every 5 people develops breathing difficulty and becomes seriously ill,
- breathing difficulty, cough and fever symptoms get medical attention,
- older people are more likely to develop illness seriously,
- underlying medical problems like diabetes, heart problems and high blood pressure are more likely to develop illness seriously.

Coronaviruses are known as zoonotic referring to transmission between human and animals and the transmission has been so rapid effecting the whole world (Bianconi et al. , 2020; Jung et al. , 2020; Liu et al. , 2020; Önder, 2020; Roosa et al. , 2020a; Tian et al. , 2020; Yüzbaşıoğlu, 2020). By the 23rd of January, approximately after one month the first cases were revealed in Wuhan, there were 581 confirmed cases; 571 cases from China, 95 severally ill and 17 reported deaths (WHO, 2020g). Despite the high levels of transmission; COVID-19's epidemiological features are stated to be still unclear (Önder, 2020; Roosa et al. , 2020b). It is stated that human-to-human transmission occurs among close contacts referring to the importance of keeping social distance. It

is discovered the urge of using eye protection while in close contact with patients after a healthcare worker was infected despite N95 respirator and being fully gowned with protective suit (Li et al. , 2020; Önder, 2020; Yüzbaşıoğlu, 2020).

As the whole world battles, the measures have been taken against to slow down the spread of the outbreak. Public places and public transport are disinfected regularly, schools, universities are closed, lockdowns are imposed, incoming travelers' temperatures have been taken, domestic flights are canceled, travels are banned, border control and quarantine measures are taken, borders are closed, entry bans/restrictions are implemented, curfew is instated, the importance of hygiene and social isolation is emphasized, specified regions are quarantined. Except supermarkets and pharmacies, all shopping centres, restaurants, cafeterias and similar places are closed. It is banned to go out except urgent needs and going to work. The measures are announced by the governments by several channels of communication. As WHO suggested prevention and control as the best ways to deal with Covid-19 infection; citizens are instructed to stay at home and wash their hands. Work place rents, credits, interest payments and social security payments are delayed.

By the 24th of April 2020 with 73.911 new cases, 2.626.321 confirmed cases of COVID-19 and 181.938 deaths were reported to WHO; there are 1.284.216 confirmed cases in Europe, 995.510 confirmed cases in the USA, 149.295 confirmed cases in Eastern Mediterranean, 139.782 confirmed cases in Western Pacific, 38.572 confirmed cases in South East Asia and 18.234 confirmed cases in Africa (WHO, 2020h). The highest cases revealed by WHO by country, territory or area considering confirmed cases and deaths are listed below:

United States Of America

In the United States of America, from January 20 to April 24 2020, there were 830.053 COVID-19 confirmed cases and 42.311 deaths.

- By the 31st of January there were 7 confirmed cases.

There was no death by the end of January.

- In February there were 55 confirmed cases, by the end of February there were 62 confirmed cases.

There was no death by the end of February.

- In March there were 140.578 confirmed cases, by the end of March there were 140.640 confirmed cases.

There were 2398 deaths in March.

- By the 24th of April with 689.413 cases; there were 830.053 confirmed cases.

By the 24th of April with 39.913 deaths; there were 42.311 deaths.

Spain

In Spain, from January 31 to April 24 2020, there were 213.024 COVID-19 confirmed cases and 22.157 deaths.

- By the 31st of January there was 1 confirmed case.

There was no death by the end of January.

- In the February there were 44 confirmed cases, by the end of February there were 45 confirmed cases.

There was no death by the end of February.

- In March there were 85.150 confirmed cases, by the end of March there were 85.195 confirmed cases.

By the end of March there were 7340 deaths.

- By the 24th of April with 127.829 cases; there were 213.024 confirmed cases.

By the 24th of April with 14.817 deaths; there were 22.157 deaths.

Italy

In Italy, from January 29 to April 24 2020, there were 189.973 COVID-19 confirmed cases and 25.549 deaths.

- By the 31st of January there were 2 confirmed cases.

There was no death by the end of January.

- In the February there were 1126 confirmed cases, by the end of February there were 1128 confirmed cases.

There were 29 deaths by the end of February.

- In March there were 100.611 confirmed cases, by the end of March there were 101.739 confirmed cases.

There were 11.562 deaths in March, by the end of March there were 11.591 deaths.

- By the 24th of April with 88.234 cases; there were 189.973 confirmed cases.

By the 24th of April with 13.958 deaths; there were 25.549 deaths.

Germany

In Germany, from January 28 to 24 April 2020, there have been 150,383 confirmed cases of COVID-19 with 5,321 dea In Germany, from January 28 to April 24 2020, there were 150.383 COVID-19 confirmed cases and 5.321 deaths.

- By the 31st of January there were 7 confirmed cases.

There was no death by the end of January.

- In the February there were 50 confirmed cases, by the end of February there were 57 confirmed cases.

There was no death by the end of February.

- In March there were 61.856 confirmed cases, by the end of March there were 61.913 confirmed cases.

There were 583 deaths in March.

- By the 24th of April with 88.470 cases; there were 150.383 confirmed cases.

By the 24th of April with 4738 deaths; there were 5321 deaths.

The United Kingdom

In The United Kingdom, from January 31 to April 24 2020, there were 138.082 COVID-19 confirmed cases and 18.738 deaths.

- By the 31st of January there were 2 confirmed cases.

There was no death by the end of January.

- In the February there were 21 confirmed cases, by the end of February there were 23 confirmed cases.

There was no death by the end of February.

- In March there were 22.122 confirmed cases, by the end of March there were 22.145 confirmed cases.

There were 1408 deaths in March.

- By the 24th of April with 115.937 cases; there were 138.082 confirmed cases.

By the 24th of April with 17.330 deaths; there were 18.738 deaths.

France

In France, from January 24 to April 24 2020, there were 119.583 COVID-19 confirmed cases and 21.823 deaths.

- By the 31st of January there were 6 confirmed cases.

There was no death by the end of January.

•In the February there were 94 confirmed cases, by the end of February there were 100 confirmed cases.

There were 2 deaths by the end of February.

•In March there were 43.877 confirmed cases, by the end of March there were 43.977 confirmed cases.

There are 3015 deaths in March, by the end of March there were 3017 deaths.

- By the 24th of April with 75.606 cases; there were 119.583 confirmed cases.

By the 24th of April with 18.806 deaths; there were 21.823 deaths.

Turkey

In Turkey, from March 11 to April 24 2020, there were 101.790 COVID-19 confirmed cases and 2.491 deaths

- There was no confirmed case by the end of January.

- There was no confirmed case by the end of February.

- In March there were 10.827 confirmed cases.

There were 168 deaths by the end of March.

- By the 24th of April with 90.963 cases; there were 101.790 confirmed cases.

By the 24th of April with 2323 deaths; there were 2491 deaths..

Iran (Islamic Republic Of)

In Iran (Islamic Republic of), from February 19 to April 24 2020, there were 88.194 COVID-19 confirmed cases and 5.574 deaths.

- There was no confirmed case by the end of January.

In the February there were 593 confirmed cases.

There were 43 deaths by the end of February.

•In March there were 44.013 confirmed cases, by the end of March there were 44.606 confirmed cases.

There were 2855 deaths in March, by the end of March there were 2898 deaths.

•By the 24th of April with 43.588 cases; there were 88.194 confirmed cases.

By the 24th of April with 2676 deaths; there were 5.574 deaths.

China

In China, from January 11 to April 24 2020, there were 84.312 COVID-19 confirmed cases and 4.642 deaths.

•By the 31st of January there were 9720 confirmed cases.

There were 213 deaths by the end of January.

•In February there were 69.669 confirmed cases, by the end of February there were 79.389 confirmed cases.

In February there were 2625 deaths, by the end of February there were 2838 deaths.

•In March there were 3156 confirmed cases, by the end of March there were 82.545 confirmed cases.

There were 476 deaths in March, by the end of March there were 3314 deaths.

•By the 24th of April with 1767 cases; there were 84.312 confirmed cases.

By the 24th of April with 1328 deaths; there were 4642 deaths.

Russian Federation

In Russian Federation, from January 31 to April 24 2020, there were 68.622 COVID-19 confirmed cases and 615 deaths.

•By the 31st of January there were 2 confirmed cases.

There was no death by the end of January.

•In the February there were no confirmed cases.

There was no death by the end of February.

•In March there were 1835 confirmed cases, by the end of March there were 1837 confirmed cases.

There were 9 deaths in March.

•By the 24th of April with 66.785 cases; there were 68.622 confirmed cases.

By the 24th of April with 606 deaths; there were 615 deaths.

Brazil

In Brazil, from February 26 to April 24 2020, there were 45.757 COVID-19 confirmed cases and 2.906 deaths.

•By the 31st of January there was no confirmed case.

There was no death by the end of January.

- In the February there was 1 confirmed case.

There was no death by the end of February.

•In March there were 4255 confirmed cases, by the end of March there were 4256 confirmed cases.

There were 136 deaths in March.

- By the 24th of April with 41.501 cases; there were 45.757 confirmed cases.

By the 24th of April with 2770 deaths; there were 2906 deaths.

Belgium

In Belgium, from February 4 to April 24 2020, there were 42.797 COVID-19 confirmed cases and 6.490 deaths.

- By the 31st of January there was no confirmed case.

- In the February there was 1 confirmed case.

There was no death by the end of February.

•In March there were 11.898 confirmed cases, by the end of March there were 11.899 confirmed cases.

There were 513 deaths in March.

- By the 24th of April with 30.898 cases; there were 42.797 confirmed cases.

By the 24th of April with 5977 deaths; there were 6490 deaths.

The numbers of confirmed cases and deaths allow tracking the speed of the spread of the outbreak. Referring to the data March is noteworthy with the increasing numbers of both confirmed cases and deaths.

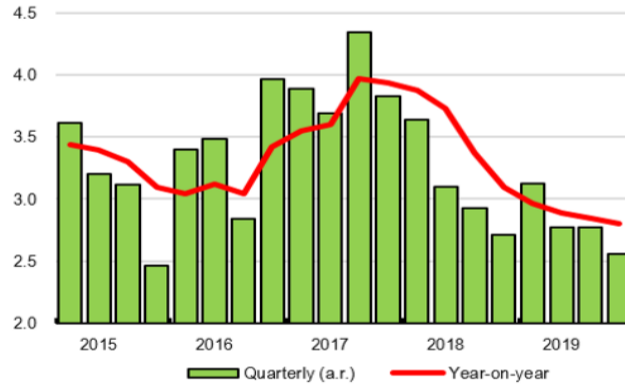
By the 24th of April antiviral treatments or vaccine for Covid-19 infections were not reported. Research has been going on. Scientists have been working on. Good news have been coming regarding to the improvements in the production of effective drugs, safe and stable vaccines. The remainder of the paper is organized as follows. Section I presents the preliminary economic and environmental indicators of the pandemic. Section II explains ethical issues revisiting Asian Disease Problem. Section III concludes.

1. PRELIMINARY ECONOMIC AND ENVIRONMENTAL INDICATORS OF THE PANDEMIC

Originated in China; the coronavirus pandemic has created an economic cost besides it has killed and infected people all around the world. The primary apprehension seems to be the fear of

the economic destruction. Central banks have attempted to response to changing market conditions by adjusting interest rates. In addition to the current situation, future expectations will shape the tendencies of the market forces leading to the changes in the stock prices. OECD announces that the world economy is at risk. It is expected a global recession in 2020 and even the short-term economic consequences of Covid-19 pandemic is serious. Global growth has lost momentum.

Graph 1:Global GDP growth(%)

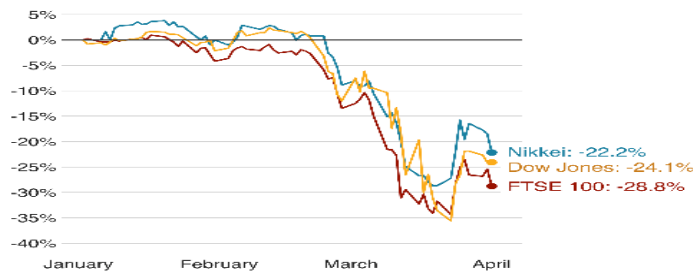


Source: OECD, 2020.

It is not possible to ignore the economic impact of the pandemic in daily life. The prices of the goods and services suddenly has risen up to extortionate levels. Supermarkets, pharmacies, online stores and market places have suddenly run short of spesific goods such as disinfectant and surgical/medical/procedure masks. Basic foodstaff such as flour, sugar, pasta and toilet papers, paper towels have been almost impossible to find even in the local supermarkets and groceries. Moreover consumers have begun stockpiling. Life syles have been modified in order to mitigate the risk; the risk of death. Covid 19 epidemic is expected to modify food consumption habituals as stricter rules on food hygiene, prohibition of the consumption, cooking and storing of certain foods will be implemented (Farnoosh et al. , 2020).

It is reported that Dow Jones Industrial Average, the Nikkei and the FTSE have seen huge one day declines by the end of December. The basic motivation behind stock market fall is the panic following the change in the expectations because of the coronavirus pandemic.

Graph 2:The impact of coronavirus on stock markets

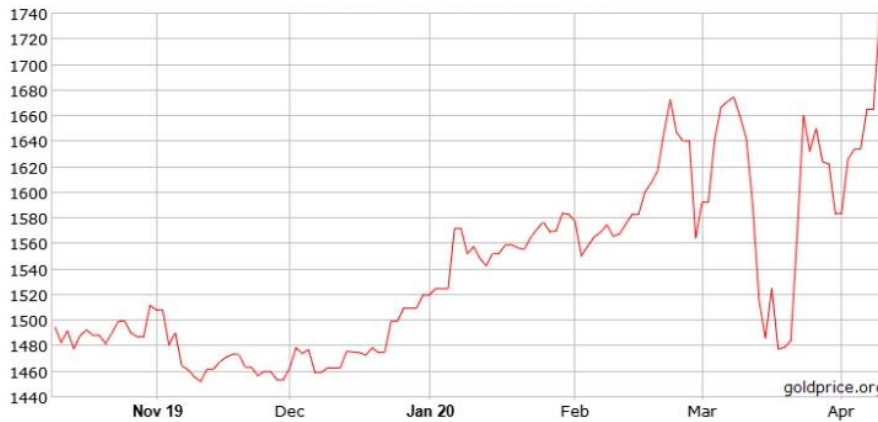


Source: Jones et al, 2020.

Because of the relationship between price fluctuations in gold and the value of dollar; rather than investing in gold markets investing in cryptocurrencies is suggested as an optimal option to

avoid risk of the possible effects of coronavirus epidemic on stock markets depending on the increased widespread usage of internet (Zeren and Hızarcı, 2020).

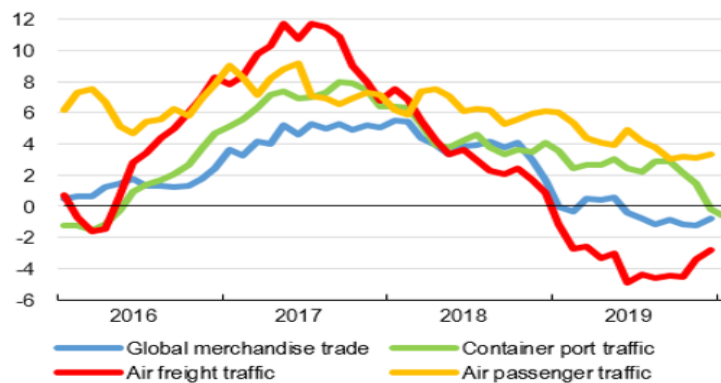
Graph 3: 6 Month Gold Price in USD/oz (high:1736.20, low: 1452.10)



Source: Goldprice, 2020.

Preliminary economic measures taken can be categorized as state loans or credit guarantees for companies by France, Germany, UK, US, Italy, Spain; income subsidies for affected workers by Spain, US, Germany, Italy, France; tax deferrals by UK, France, Spain, Germany; social security deferrals or subsidies by France, Germany, UK, Spain; debt repayment holidays by Spain, UK and Italy (Financial Times, 2020). Pandemic mitigation restrictions (PMRs) such as the suspension of all nonessential trade, strict nationwide lockdowns and travel bans have a significant impact on international contracts (Anderson et al. , 2020; Chen, 2020, Cohen and Kupferschmidt, 2020; Heymann and Shindo, 2020; Huang et al. , 2020; Torsello and Winkler, 2020; Wilder-Smith and Freedman, 2020).

Graph 4: Global trade growth (Y-o-y % changes, 3-mma)

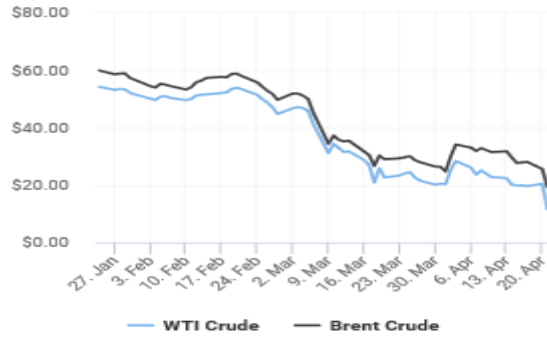


Source: OECD, 2020.

Generalized supply difficulties, price fluctuations and liquidity crises due to the increased health risks, export controls of certain medical products/personal protective equipments/medical ventilators, temporary export bans, licensing/authorization requirements, export restrictions over specific agricultural products referring to the food supply security are the trade policy measures expected to have an impact on business cycles (Fontaine and De Ly, 2020; Gruszczynski, 2020; Torsello and Winkler, 2020).

Due to the lock-downs, curfews, canceled flights and travel bans the pandemic is expected to have a negative impact on the tourism sector as well as on the other sectors of the economy(Acar, 2020). Following the decrease in global oil demand, the price of crude oil fell dramatically. However the fall in oil prices aren't reflected in full at the pump because of the taxes.

Graph 5: WTI and Brent crude oil price (3 months)

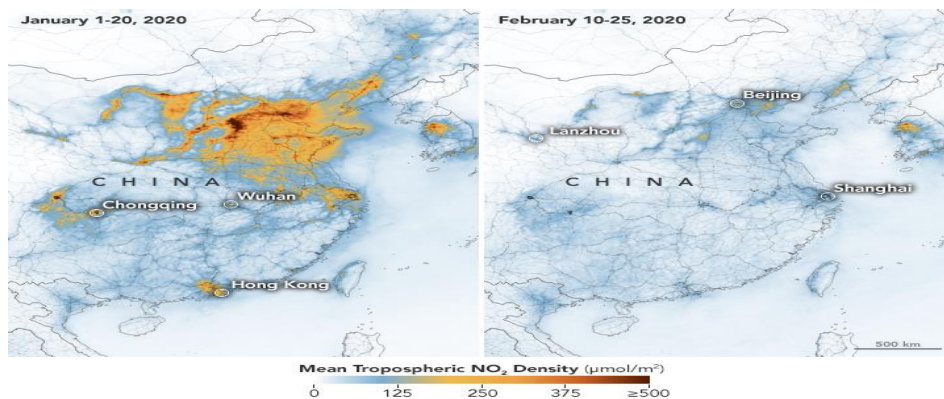


Wednesday April 22, 2020, WTI Crude:\$11.63; Brent Crude:\$19.77.

Source: Oilprice, 2020.

Measures to fight against the spread of coronavirus pandemic has led to a decrease in transport. Whether this situation can have a positive impact on the climate change has been called into question. It is stated that air quality levels improved recently due to the reduction in the emission levels of nitrogen oxides (NO_x), carbon dioxide (CO₂), particulate matter (PM) and ozone (O₃) formation caused by traffic and factory while unrecyclable and organic waste has been growing (Hamwey, 2020). Significant decreases in nitrogen dioxide (NO₂) -which is known to be emitted by industrial facilities, power plants and motor vehicles- level across China before the quarantine (January 1-20) and during the quarantine (February 10-25) is detected by NASA and European Space Agency (ESA) pollution monitoring satellites NASA Earth Observatory.

Figure 1:The concentrations of nitrogen dioxide (NO₂) levels before and during the quarantine



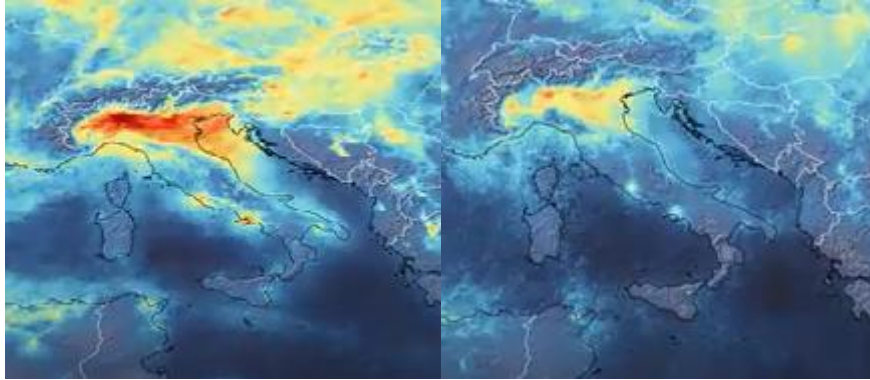
Data comes from Tropospheric Monitoring Instrument (TROPOMI) on ESA's Sentinel-5 satellite Image credit: Josh Stevens / NASA Earth Observatory

Source: NASA Earth Observatory, 2020.

Drop in NO₂ concentration level over Italy which is particularly evident in the Pro Valley of northern due to the nationwide lockdown of the country is shown by the European Space Agency

(ESA) and it is mentioned that reduction in emissions coincides with the reduction in traffic and industrial activities due to the lockdown (Patel, 2020a). However it is emphasized that the reduction in atmospheric nitrogen dioxide (NO₂) levels due to the decrease in transportation, business and industry because of the coronavirus pandemic solely cannot be interpreted as the air quality is high (Patel, 2020b).

Figure 2: Drop in NO₂ concentration level over Italy



Data comes from ESA's Tropospheric Monitoring Instrument (TROPOMI) onboard the Copernicus Sentinel-5P satellite.

Source: Patel, 2020b.

Whether the coronavirus pandemic may have a positive impact on the climate change via reduced carbon emissions needs time to be proved and depends on the permanence of the circumstances.

This global transformation also reminds renewable energy resources with their reducing cost and improving technology referring to sustainability considering environmental concerns. However such a transformation is usually criticized to result in imposing increasing carbon tax. Competitiveness of the energy resources may alter, leading to a change in the monopoly mark-up in the energy markets. The new normal reshapes with the changing determinants of the world economy as a result of the coronavirus pandemic.

The economic indicators during the pandemic remind researchers the great depression for future expectations. Originated in the United States the great depression began after the stock market crash in 1929, lasted until 1939 and has been the worst worldwide economic downturn. Drastic declines in output and severe unemployment were followed by deflation in every country of the world with a decrease in consumer expenditures, investments, industrial output and employment. Despite the low wages, stock prices were higher than their actual value, consumer debt was increasing, there was drought, food prices were falling, banks couldn't liquidate. In the recession period consumer expenditures and production decreased. However stock prices continued rising, investors sold overpriced shares leading to the stock market crash which is known as "Black Thursday." Production decreased, unemployment increased, wages fell, purchasing power decreased, thousands of banks were closed. It is critical to examine the underlying causes of the great depression considering the economic, social and political environments of the mentioned period. In order to converge both the great depression and the predicted economic crises during or after coronavirus pandemic further analysis is needed. This is a novel coronavirus. There is a growing research aiming to learn more about it.

2. ETHICS DURING THE PANDEMIC AND REVISITING ASIAN DISEASE PROBLEM

The principality during a pandemic is the allocation of the scarce sources effectively reminding the basic definition of economics. The coronavirus epidemic leads ethics committees to the decision of the distribution of scarce medical resources effectively considering emergencies, transparency and accountability. The basic principal regarding to the ethical issues is “greater likelihood of survival and who have more potential years of life”. “Guidance For Managing Ethical Issues in Infectious Disease Pandemics” published by WHO in 2016 in order to manage ethical issues in infectious disease pandemics determines the following principles (WHO, 2016):

- beneficence
- utility
- respect for persons
- liberty
- reciprocity
- solidarity
- balancing considerations of utility and equity
- defining utility on the basis of health related considerations
- paying attention to the needs of vulnerable populations
- fullfilling reciprocity based obligations to those who contribute to infectious disease pandemic response efforts
- providing supportive and palliative care to persons unable to access life saving resources
- consistent application
- resolution of disputes
- avoiding corruption
- separation of responsibilities.

Covid 19 pandemic has brought ethical dilemmas into focus. As the number of infected people increases it is getting harder for the hospitals to maintain needed treatment because of the lack of intensive care unit beds (as known as ICU bed) or critical care beds (CCB), ventilators and other limited equipments. Gompertz and time series models are used to forecast the need for the total number of intensive care beds and the number of ventilators that will be needed to catch long-term trends(Ankaralı, 2020). The ethics is called into question from this point on and health professionals find themselves to decide the patient to be benefited from the limited ICU beds or ventilators. When it is understood that elderly people with underlying health conditions are less

likely to benefit from treatment, it is concluded that some people should be left to die and the ethical issues have become the main topic of conversation. Decision of the allocation of the scarce medical resources considering priorities and restrictions is recalling economic rationality. However economic rationality has been one of the mostly investigated research topics so far. What makes economic rationality such popular is the several revealed contradictions with real life. Examining economic behavior and economic decision making under risk and uncertainty; the theory of expected utility suggested by John Von Neumann and Oskar Morgenstern in 1944 defines rationality suggesting a range of axioms which are invariance, completeness (complete-ordering), transitivity, continuity, independence, unequal-probability, archimedean, monotonicity and substitution (independence of irrelevant alternatives). Although the theory of expected utility had great currency because of its consistent and solid axiomatic structure; it didn't take so long that the theory of expected utility itself and its axioms to be called into question as a foregone conclusion of scientific thought. Following the first challenge which is known as "Allais Paradox" in the literature suggested by nobel laureate economist Maurice Allais in 1951 to the independence axiom known as the heart of the theory of expected utility; it has been provided evidence by a growing research that individual behavior contradicts with the basic tenets of the theory. In 1979 psychologist and nobel laureate in economics Daniel Kahneman and Amos Tversky presented prospect theory as a critique and an alternative model of the theory of expected utility. While the theory of expected utility suggests "utility", prospect theory suggests "value". Kahneman and Tversky suggested value function which has concave and convex parts in the gain and loss domains respectively. The value function is also steeper in the loss domain referring to the sensitivity towards losses when compared to same amount of gains. In contrast with the theory of expected utility that considers final asset position; prospect theory considers gains and losses from a reference point.

According to the theory of expected utility, invariance assumption states that different presentations of a choice problem yield the same preference order independent from how it is framed (Arrow, 1982, Li and Xie, 2006; Bloomfield, 2006; Dreisbach and Guevara, 2017; Jullien, 2016). According to the definition of economic rationality the framing of the states doesn't effect the choices or preferences or the decisions of the individuals. Theoretically the decision is independent of the frames; how the question or the situation is framed does not have an effect on behavior, on decision or on preferences. Although the theory of expected utility assumes that the framing doesn't alter individuals' decisions; there are revealed situations where framing matters. It is proved that framing of a choice problem affects preferences (Tversky and Kahneman, 1981; Kahneman and Tversky, 1984; Tversky and Kahneman, 1986; Kahneman, 2003).

Asian disease is a popular phenomenon suggested by Amos Tversky and Daniel Kahneman in order to note the framing effect referring to the violation of invariance axiom of the theory within the context of economic rationality. Certainty, isolation and reflection effects suggested by Daniel Kahneman and Amos Tversky in the prospect theory also serve for the framing effect that is the violation of the invariance axiom of the theory of expected utility.

It is interesting that the participants attended Asian Disease experiment are wanted to assume a pandemic of an unusual Asian Disease 39 years ago which has become a reality today! Although the original experiment conducted with students at Stanford University and University British Columbia; it is provided evidence that framing is a reliable phenomenon by the application of the

problem to the physicians (McNeil et al. , 1982). Below is the original scenerio of the Asian Disease Problem suggested by Tversky and Kahneman in their famous paper “The Framing of Decisions and the Psychology of Choice” published in Science in 1981; N denotes the total number of respondents for each problem and the percentage of the chosen option is shown in brackets (Tversky and Kahneman, 1981):

“Problem 1 [N = 152]:

Imagine that the U.S. is preparing for the pandemic of an unusual Asian disease, which is expected to kill 600 people. Two alternative programs to combat the disease have been proposed. Assume that the exact scientific estimate of the consequences of the programs are as follows:

If Program A is adopted, 200 people will be saved. [72 percent]

If Program B is adopted, there is 1/3 probability that 600 people will be saved, and 2/3 probability that no people will be saved. [28 percent]

Which of the two programs would you favor?

Problem 2 [N = 155]:

If Program C is adopted 400 people will die. [22 percent]

If Program D is adopted there is 1/3 probability that nobody will die, and 2/3 probability that 600 people will die. [78 percent]

Which of the two programs would you favor?”

These two problems illustrate the impact of framing on decisions made. In the first problem the attitude is risk averse, the majority chooses saving 200 lives with certainty although the probable option has exactly the same expected value which is 200 too. The word “saving” which is positive induces to be risk averse. However when the same scenerio is presented only with a small change in framing using the word “die”, this time it is observed a dramatical change in the decision despite the same expected value which is 200 again. Using the word “die” seems to induce to be risk taking. While certain live of 200 people is more acceptable in the first problem; certain death of 400 people is less acceptable in the second one.

Covid-19 pandemic has been killing people. Data regarding to the number of tests, infected and recovered people has been updated every single day. There is a growing data with number of tests, deaths, new cases, recoveries shown by tables, graphs, simulations and daily charts. Besides economic, political, social damages to society covid-19 pandemic has also arised psychological damage signaling to be long-lasting. Asian Disease Problem emphasize the impact of framing. Regarding to the framing effect, presenting the data taking account of possible insights, healing rate and time, the number of recovering patients and recovery rates may at least mitigate the anxiety caused by the coronavirus pandemic.

CONCLUSION

The coronavirus pandemic that has been experienced in 2020 has reoriented every single life in different parts of the world and seems to be told for centuries. The risk of a global recession urges governments to be cautious. It is reasonable to expect structural changes in the process of economic globalization, international trade relations and governance. Travel restrictions has effected manufacturing, highways, airline and tourism industries, shops and car dealerships and supply chains of big companies. Trade seems to be reshaped in order to avoid from market failures and several costs to the society.

While stock markets, components/contracts/spesifications of exports/imports, fruit/food/vegetable sectors and direct investments seem to be effected at the first stage; it remains as a necessity to monitor oil prices, plastic products, automotive industry, iron/steel/copper/mining and retailer/furniture/textile sectors. Global markets will have the common problems from now on untill markets signals normally.

It is critical to expand intensive-care units in the hospitals. Equipments such as protective gear, respirators and masks should be provided without interruption. Production of protective equipment, sanitizing gel and ventilating machines should be subsidized. Governments are expected to give guarantees at the first step to spin the wheel. Fiscal measures such as tax relief are needed to save different sectors from bankruptcy.

Because of its impact on sales, industrial production chains and investment processes; the decision of lockdown is evaluated as the final remedy by the governments. Thus achieving the aim of obeying the rules by the citizens seem to be in the foreground. Hygiene must be a priority at every step. It is important to maintain izolation and social distancing. It is certain that behaviour determines how the virus spreads.

Asian Disease Problem presents the importance of framing within the context of decision making. The way of the presentation of the same situation alters the decisions made. Framing has an impact on attitudes towards risk. The findings of Asian Disease Problem provide evidence for the importance of the engagement of the behavioural insights in the policy design. All of the suggestions and decisions made by the policy makers and adopted by the governments should have a reciprocity in the society. Because every society has its inherent habituals, traditions and lifestyles; it shouldn't be forgotten that suggestions will only make an impact as long as the society accepts it. The way of how the precautions or related policies are presented may induce reciprocity then lives can be saved by leading people obeying the rules automatically and inherently. Thus behavioral dimensions should be considered during the pandemic.

In addition to a harmonization between legal adjustments and the agents; as long as proper and applicable measures are taken and goal directed feasible policies are designed it will be possible to recover quicker after the pandemic. The recovery of health, economy, social, politics and environment related issues still remains as an open question both at the local, regional, national, international and global levels. There seems to be a long lasting transformation of new technologies, economic, social, environmental and political concerns promising a "new" world.

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