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Sengupta, Atanu and Hazra, Anirban

The University of Burdwan, The University of Burdwan

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# FROM THE AURA OF SUN TO THE DEVIL'S DOOR: A BRIEF HISTORY OF CORONA

Atanu Sengupta<sup>1</sup> & Anirban Hazra<sup>2</sup>

## *Abstract*

*The spikes of sun give us a beautiful aura during solar eclipse. The spikes of a virus are the humanity is threatening. The new virus COVID19 is a sub group of coronaviruses. Such viruses are spike and cause few like diseases (SARS, MERS, and COVID19 etc.). Such viruses existed in wild animals long-ago. Long ago in 1798 Malthus wrote his famous book An Essay on the Principle of Population. He predicted that an over shooting of population over food grains production will create a pressure. This will lead to a Nature's wrath. In the listing of wrath, Malthus mentioned some natural disasters. We thought Malthus was proved wrong by technological revolution (Lucas; 2004). However, probably he is now laughing in his grave. The push for food in Chinese Checker and the foray into the realm of wild fauna has probably ticked this virus. Now we are confronting a Malthusian wrath in a new form that pandemic of COVID19. Numerous socio-economic factors become important in the transmission, spread and mortality caused by COVID19. This short note tries to bring out the important of these factors in assessing the impact of COVID19. Whatever it may be COVID19 is teaching a lesson- a lesson to live in harmony with Nature. Are we prepared to learn this lesson? Or else our fate would be like dinosaurs in the remote past. It is this haunting reality that COVID19 forces us to learn.*

Key words: Malthusian economics, man-land ratio, economic losses, inequality of losses

JEL Classification: Q 50, Q51, Q54, Q56, Q57

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<sup>1</sup> Professor, Department of Economics, The University of Burdwan. Email – sengupta\_atanu@yahoo.com

<sup>2</sup> Researcher, Department of Economics, The University of Burdwan. Email – coolrana.07@gmail.com

## **Introduction**

The spikes of sun give us a beautiful aura during solar eclipse. The spikes of a virus are the humanity is threatening. The new virus COVID19 is a sub group of coronaviruses. Such viruses are spike and cause few like diseases (SARS, MERS, and COVID19 etc.).Such viruses existed in wild animals long-ago. Their entry into the human body created a panic since the human body is not prepared for the viruses. The recent COVID19 came from the Wuhan province of China. It is predicted that there was a species jump due to mutation but the transmission is still unknown.

Long ago in 1798 Malthus wrote his famous book *An Essay on the Principle of Population*. He predicted that an over shooting of population over food grains production will create a pressure. This will lead to a Nature's wrath. In the listing of wrath, Malthus mentioned some natural disasters. We thought Malthus was proved wrong by technological revolution (Lucas; 2004). However, probably he is now laughing in his grave. The push for food in Chinese Checker and the foray into the realm of wild fauna has probably ticked this virus. Now we are confronting a Malthusian wrath in a new form that pandemic of COVID 19.

## **The Chinese Checker**

To find out the history of Chinese food habits we must see the economic history of them. The man-land ratio of China remained extremely small over its entire history and not improved recently (Maddison 1998). According to FAO statistics 1993, the proportion of land suitable for crop production by international standards is 10 per cent of total area. The unusually small figure for China is a result of climate and topography (large areas of mountain and desert) in contrast to India that is able to cultivate more than half its total area, or Europe where the proportion is more than a quarter. Even the United States, where settled agriculture is much more recent, is able to cultivate twice the Chinese proportion The Chinese man-land ratio is extreme. For every person

engaged in farming, there is only one-third of a hectare of cultivated land, compared with 99 hectares in the United States.

This paucity of land forced China not to optimize its animal husbandry thereby not getting the animal manure (such as cow dung) that was used elsewhere in vogue in other parts of world. In the fringe area (such as Mongolia) animal herd was reared before China took over it. After annexation to China, these areas began to show the same features as of it (Maddison 1998). As Maddison (1998) argued, this forced China to use unhealthy practice of manuring such as use of “human droppings”, use of night soil etc. Double cropping, intercropping, seed bedding and transplantation were further methods for economizing land. Even after using the new technology, irrigation and other methods, the proportion of land suitable for crop production by international standard has risen 0.08 in 1993 to 0.09 in 2011. The settlement of new manufacturing industrial units also leads to this land shortage more acute. This shortage of land was also reflected in Chinese dietary habits. Since China has insufficient supply of normal animal proteins from domesticated animals and birds, it has to increasingly search into the wild life. It is from here that COVID19 has spread. The virus has jumped over species and mutated. Since our body mechanism is ill prepared for it, the havoc is created. As Malthus argued the mismatch of food grains production and population has its toll in the form of Nature’s wrath- the spread of a new mutated virus. On fact previous corona viruses also spread from here-the Wuhan wet market. If not properly controlled, in future, the market can give rise to another mutated virus.

The problem of Chinese checker does not end here. Its spread and containment raises some basic questions about the way we define democracy. First is the spread. It is alleged that had China been an open democratic society, the news of virus break would have spread more easily. The authorities would have been bound to action preventing further spread. In fact, the authorities

first tried to suppress the facts. It was the concerned efforts of a doctor that this became news. He was first ridiculed by the authorities. However such concealment would have easily happened in India, where vote fortune depends on a good image and propaganda rather than actual work. This is built on the huge ignorance of our public.

The second is the issue of containment. China has successfully stopped the epidemic. This was certified by WHO. The government surveillance of private in monitoring the mobility the people has largely helped in curbing the epidemic. Such draconian measures appear to be against the spirit of democracy and freedom. Perhaps we are wrong. We should differentiate as Rousseau (1762) did between General will and will of all. According to Encyclopedia Britannica, general will is “a collectively held will that aims at the common good or common interest”. Rousseau distinguishes the general will from the will of all that arises from particular and often contradictory wills of individuals and groups. In *The Social Contract* (1762), Rousseau argues that freedom and authority are no way antithetic to each other. Legitimate laws of any state are on the general will of all its citizens. “In obeying the law, the individual citizen is thus only obeying himself as a member of the political community.”

In this regard, we may consider the interpretation of Arrow’s theorem given by Buchanan and Tullock (1962). He argued that public decisions are made by public choice and in no way an aggregation of individual choice as later choice theorists claim. Evidently in such an aggregation, they always found a “meddlesome individual” (Sen 1970). In times such as this, there is no room for such an individual. It is true, that social decisions based on abstract choice may lead to a rise of a demagogue or dictator (Sen 1970). But ultimately, we have to depend on the power of general will to curb such caricatures.

## **The Spread**

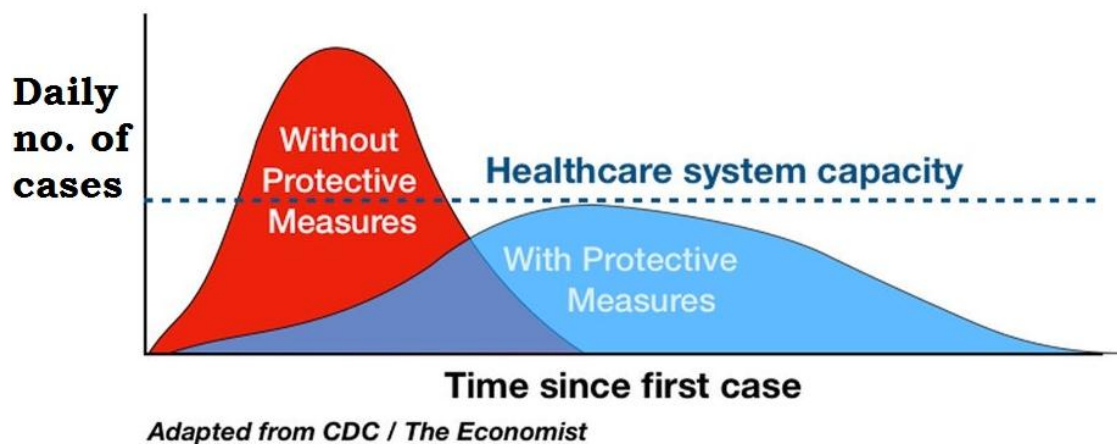
This new found virus spread like a wild fire from its origin in China and became a pandemic. There are two causes of it. The main reason is this in the basic nature of man. Man is a social animal and not a quarantined one like lions, ligers or even street dogs who have a fixed area of its own. As argued by Adam Smith (1776) long ago, “Nobody ever saw a dog make a fair and deliberate exchange of one bone for another with another dog. ....But man has almost constant occasion for the help of his brethren,..." (Wealth of Nations, Book 1 Chapter 2). Most the animal species stay in their own dwelling area with their family or group. They are not allowed to move (by their very nature) of hunt in the area of other groups and they also not allow others for the same. So if any animal have a viral infection which is not airborne, it will remain inside the group for their natural quarantine nature. But for men due to various kinds of social activities and different types of interaction, the infection may spread rapidly or slowly depending on the nature of the infection.

Another faculty of man is his mobility. Anthropologists claim that ever since his arrival in Africa, the *Homo sapiens* is in a constant move for want of food and livelihood. Other animals are less mobile. You can find a polar bear as a neighbour of an African Elephant only in zoo. A few species that migrates (Birds, Fish, and Tortoise etc.) has a fixed route of migration that can be mathematically charted. Human migrations in most cases either due to individual choice or due to some social pressure (human trafficking, slave trade, developmental displacement, climatic displacement etc.) are not dependent on any pre-prescribed route. Added to this is the flow of temporary migrants – tourists, teachers, students, business personnel, Government personnel and others. Hence their paths are erratic and unpredictable.

If these two points are combined and the disease is highly infectious such as COVID19, the spread can be very rapid and often out of control.

### **Malthus and Reality**

Malthus predicted the *Nature* to return to its equilibrium between food grain production and population by expressing his fury. The growth theorists have long debunked it by their logic of sustained growth in steady state. Now after long 222 years, Malthus has returned in the new *Avatar* – the Gaussian normal Curve. Its spread and fate of this new epidemic expressed by specialists through normal curve (reference from New York Times) these are shown in picture below-



*Source: The New York Times; March 11, 2020, Updated March 17, 2020*

It is seen that though both these curves are normal, there is a great discrepancy. The red one overshoots the health capacity and reaches a modal value that is very high. The blue one is more spread out but has a low modal value. In spite of its greater spread, it is well balanced so that the health care facility can handle it properly.

However we must be very careful when we compare the effect of COVID 19 in India. In general the condition of child health is very bad in India (Pappachan and Choonarat 2017) is estimated that

36% of the population in India have been associated with proper sanitation facilities. India is ransacked with poverty and malnutrition. The figures of National Family Health Survey-3 reveal that more than 40% of children are underweight. Again above one in four babies have low birth weight. Again, in the villages, above 45% of children under the age of 5 are underweight. One in three of the population lives below the international poverty line of US\$1.25 per day. Roughly 45% of all deaths of children under the age of 5 years may be traced to malnutrition. Even in the richest state in India (Maharashtra), more than one in three children is underweight.

As per the NFHS-3, acute respiratory tract infection symptoms are shown in 6% of children during the 2 weeks preceding the survey. Only 69% of them were sought for any type of treatment from a health facility or provider. These figures also vary widely from state to state. It is abysmally low in the northern cow belt states (such as Bihar Orissa, Chhattisgarh etc.) but satisfactory in southern states such as Kerala. Though it is true that all such children do not require antibiotics, it is certainly very low in Chhattisgarh where only 1% of the children with such symptoms received antibiotics (Pappachan and Choonarat 2017).

This lack of immunity could be a major threat when affected with COVID 19. Though the mortality rate is almost non-existent for younger people in countries such as China, Europe or USA, it must be admitted that these countries have much higher level of child health than India. Indian children might not be able sustain the effects of COVID19 as children of these countries could. In all possibility if this disease enters stage 3 in India, the fatality among children and younger age will not be insignificant. Already a 38-year-old resident of Munger district in Bihar died of Covid-19. Also recently a four month old baby in Assam has found to be affected. Hence the signs are alarming.





## **Economy in General**

For the past few weeks coronavirus causes a serious damage to the global economy. The first bullet on the global economy is the critical supply chains break down. The nations hoard medical supplies and rush to limit travel and the crisis in production facilities forcing a major reevaluation of the interconnected global economy. The ripple effects on international trade to a global pandemic will plunge the whole world into the verge of another recession. Travels have been halted, borders are shut down, production facilities have been stopped and millions of people are in effective lockdown in various areas across the globe. Trillions of dollars erased from global stock markets. The crisis has imperiled the future of millions of small businesses around the world. As an obvious result the livelihoods of vast numbers of wage earners are in a black whole.

Deep interdependence between firms and nations makes them more vulnerable to unexpected shock like this. Not only the contamination caused by the gatherings but also the globalization allowed for the rapid spread of contagious disease across the globe. And the preventive steps fostered the crisis. The firms and nations are discovering just how vulnerable they are in this era of globalization. Now we learn that globalization is fragile, despite or even because of its benefits. Farrell and Newman (2020) argued that for decades, individual firms' relentless efforts to eliminate redundancy generated unprecedented wealth. But these efforts also reduced the amount of unused resources—what economists refer to as “slack”—in the global economy as a whole. In normal times, firms often see slack as a measure of idle, or even squandered, productive capacity. But too little slack makes the broader system brittle in times of crisis, eliminating critical fail-safes. Adam Smith's *The Wealth of Nations* became the wealth of the

world as businesses took advantage of a globalized division of labor. Specialization produced greater efficiency, which in turn led to growth.

In the very near future there will be a heavy shortage of goods and services as well as capital and labour. These shortages may lead to a rapid inflation which will affect all of us but the wage earners first. The economically weaker portions of the society are in deep trouble. Collection of basic minimal means of living has become more difficult day by day.

### **Economy in a Developing Country**

Since the Wuhan coronavirus outbreak in China, day by day it spread across the globe. For last few weeks it has become pandemic. As number of confirmed cases increased day by day, the manufacturing sector, service sector and other sector shutting down to prevent the contamination. As people are getting scared of being infected by COVID19, they avoid the gatherings in markets, social, cultural and religious places. This leads to the markets and other business hubs empty.

Developing countries like India suffering from a recession and decline in regular cash flow. This is due to that India is the second largest country by population full of a huge number of labour force as well as the wage earners. Labour intensive production techniques have been used in the manufacturing sector. For these reasons as there is a supply chain breakdown and shut down in production facilities, the regular cash flow will also decline. This situation has a very serious effect on the poor who are either below poverty line or just above the poverty line. Day by day collection of basic livelihood have become more and more unaffordable for them as they are somehow dependent on the daily market flow. The degree of dependency of this part population on current market flow is higher in developing countries than that of developed countries.

According to the United Nations Millennium Development Goals (MDG) programme, 270 million people out of 1.2 billion Indians, roughly equal to 21.9% of India's population, lived below the poverty line of \$1.25 in 2011–2012. This is a signaling situation for the government as they have to not only prevent corona to spread but also think about those people who have been affected the most by this economic downfall otherwise this long sustainability of this situation may lead to a temporary famine.

### **Conclusion**

In his grave, Malthus is having the last laugh. The deep instability of land man ratio in China has triggered a virus that the social nature of man and its globalization has led havoc. Fortunately though, it has a low mortality rate though seriously affecting mostly those in the elder age groups. Since Europe and USA has greying population, the picture is becoming dangerous for man. On the contrary, the nature is relieving from it. The shutdown has brought down the pollution to a very low level. While there is some fake news about clear water and rejuvenated animals, the drop in pollution level is very real. Researchers at Columbia University found emissions of carbon monoxide fell by around 50 per cent for a couple of days this week, and detected a 5-10 per cent drop in CO<sub>2</sub> over New York City. In fact, similar situation happened previously in China and Italy. There is a drop in NO<sub>2</sub> by 36% in China and also significantly in Italy. Researchers however warn that staying home could over compensate this decline. Whatever it may be COVID19 is teaching a lesson- a lesson to live in harmony with Nature. Are we prepared to learn this lesson? Or else our fate would be like dinosaurs in the remote past. It is this haunting reality that COVID19 forces us to learn.

## **References**

Buchanan, James M., Tullock, Gordon (1962). *The Calculus of Consent: Logical Foundations of Constitutional Democracy*.

Farrell, H. and Abraham Newman (2020), "*Will the Coronavirus End Globalization as We Know It? The Pandemic Is Exposing Market Vulnerabilities No One Knew Existed*", *Foreign Affairs*. March 16, 2020.

Lucas, Robert E., (2004), "*The Industrial Revolution: past and future*", Annual Report, Federal Reserve Bank of Minneapolis, vol. 18(May), pages 5-20.

Maddison, A. (2007), "*Chinese Economic Performance in the Long Run: Second Edition, Revised and Updated: 960-2030 Ad*", OECD.

Malthus, Thomas Robert, (1798), "*An Essay on the Principle of Population*", Oxford shire, England: Oxford World's Classics.

Pappachan Binu and Imti Choonara (2017), Inequalities in child health in India, *BMJ Paediatrics Open*, 17 June 2017.

Rousseau Jean-Jacques (1762) - *The Social Contract*, trans. Maurice Cranston. Penguin: Penguin Classics Various Editions, 1968–2007.

Sen, Amartya (1970). "The Impossibility of a Paretian Liberal" *Journal of Political Economy*. 78 (1): 152–157.

Smith, Adam (1778). "*An Inquiry into the Nature and Causes of the Wealth of Nations*", 1 & 2 (2 ed.). London: W. Strahan; T. Cadell. Retrieved 10 March 2015.