

# Corona Virus and Service Industries - A Critical Perspective

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## Article Info

Volume 83

Page Number: 8664 - 8670

Publication Issue:

May - June 2020

## Abstract:

Pandemics affecting the world economy is not a new scenario. Apart from affecting lakhs of people and creating a panic situation, Covid-19 has also created havoc in many industries by slowing down their operations or temporarily suspending the operations. This has made a major impact on the world economy, thereby influencing the Gross Domestic Product in various countries. We are trying to report the present scenario by reviewing various research articles, news articles written by various critics and economists. An attempt has been made to collect real-time data from several reliable websites and authentic sources regarding the effect of coronavirus on the functioning of the service industries. Through our systematic investigation, we have found out that there is a great fall in the performance of different services industries. Further, the fall in these industries has harmed the world economy. We had also recommended some areas where further research can be carried out in the near future.

**Keywords:** Covid-19, pandemics, GDP, tourism, service industries

## Article History

Article Received: 19 November 2019

Revised: 27 January 2020

Accepted: 24 February 2020

Publication: 18 May 2020

## Introduction:

There are many cases where the breakdown of pandemics made the economies slow down and suffer by hitting different sectors and industries. Currently, in the case of CoronaVirus, the negative effect on the world economy is expected to spread at a faster rate than the previous epidemic break downs (Ruiz Estrada, 2020). We researchers belong to a country that attracts tourists in large numbers because of its rich natural, cultural and historical presence, but today the same tourism industry is now prone to the repercussions of the coronavirus outbreak. It has severely impacted tourism and its connecting industries. This being a contemporary topic, the main motive behind this paper is to bring to light the plight of the people working in these industries and also how the business has gone down. Our main objective in this paper is to review how the CoronaVirus has affected the travel, tourism, hotels, hospitality and finance industries. We attempted to state the facts right and also help the people positively combat this pandemic. CoronaVirus also

called COVID-19 is a type of virus that causes respiratory illness (Sauer, 2020). The outbreak of CoronaVirus disease originated from Wuhan, China, on 31st December 2019 (World Health Organisation, 2019). According to (Worldometer, 2020) 1,26,263 cases were confirmed across the world. The humanitarian costs of the coronavirus outbreak continue to mount with death cases of 4,633 people. The countries with the maximum reported cases were China, Italy, Iran, South Korea, and France. This virus has entered India now and is growing exponentially. The disease was confirmed Pandemic by the World Health Organisation and a state of public health emergency has been declared. This declaration has inevitably brought a damaging impact on the travel sector as many countries have taken steps of the travel ban, airport closure, restricting the travel of citizens of their country and the panic itself has made people refrain from traveling (Wilson & Chen, 2020). The outbreak of coronavirus is showing a negative impact on the global economy and the domestic economy of

countries. The transmittance of diseases from animals to humans has been on a rise since the last few decades.

### **Service Sector**

An economy is classified into three sectors i.e. agricultural sector (or primary), manufacturing (or secondary) and service (or tertiary). The agricultural sector includes farming, animal husbandry, forestry, and fisheries. The manufacturing sector consists of mining, manufacturing, and construction. All other remaining economic activities which do not come under the agricultural and manufacturing sector, fall into the services sector category. The services sector includes - services involved in the agricultural sector, activities which include supply of water, electricity and gas, transport and communications, finance and insurance, business and personal services, wholesale and retail trade, and community and social services. (Wu, 2007) and (Ochel & Wegner, 1987). Covid-19 had slowed down the processes of many service industries. Many organizations had to shut down their operations voluntarily as Covid-19 is spread mostly through social interaction which is a vital component in services. Hence, authors here tried to list out some of the services which contribute significantly to the world GDP but are hard hit due to social isolation which is a resultant of Covid-19.

### **Travel and Tourism Sector: World economy**

A swift rise in the number coronavirus cases patients innately has a link to the travel sector. Leiper (1979) defined tourism as “the system involving the discretionary travel and temporary stay of persons away from their usual place of residence for one or more nights, excepting tours made for the primary purpose of earning remuneration from points en route”. This sector has become an area of interest for many Asian countries now. Many of the Asian economies realized that exploring their country’s natural heritage, developing them and marketing them for tourism will help in frosting the growth of

the economies by generating employment, disposable income, generating foreign exchange and improving the living standards of the people (Amin, Kabir, & Khan, 2019). This, in turn, helps in improving the Gross Domestic Product (GDP). It is a method to gauge a country’s growth by calculating the total value of goods and services produced within a nation in a specified time. Each sector has its contribution to the GDP growth of a country and worldwide. In 2019, The United States’ travel and tourism industry ranked first place in the contribution of GDP worldwide. It was the largest contributor to GDP worldwide with about 580.7 billion U.S. dollars, followed by China with 403.5 U.S dollars. Germany (143.4 U. S dollars), Japan (126.3 U. S dollars), Italy (119.7 U.S dollars), France (112 U.S dollars), United Kingdom (109.4 U.S dollars) and then India. India’s contribution to travel and tourism towards the GDP worldwide was 108.3 billion U.S dollars (Statista, 2020)

### **Travel and Hospitality Industry**

Tourism has entered the crisis stage as people had to restrict their activities to their homes due to the outbreak of Covid-19 resulting in the stock market crash of all the giant sectors. Tourism has a strong correlation with the per capita income of the host country people (Webster, 2006). China’s travel industry is one of the largest in Asia and fastest-growing in the world but, today the losses anticipated from this pandemic are expected to be more than that experienced from the SARS outbreak in 2003. The country’s tourism industry and tourist destinations visited often by Chinese travelers are the worst affected. The contribution of this industry to its GDP is 11 percent. Hotels, airlines, and cruise operators are few industries that have to suffer the repercussions of this outbreak. This outbreak coincided with China’s Lunar New year, which happens to be the busiest travel season in Asia. The holiday rush-hour traffic stands canceled in large numbers in the USA, Europe and also the areas surrounding China. The spread of this illness has

caused fear among people and forced the companies in China to close offices, factories and, restrict travel to and from the country. Italy is a popular tourist destination and a member state of the European Union. It has witnessed the highest number of coronavirus cases outside China (Worldometer, 2020). The outbreak of this is a total disaster involving huge economic, social, and political costs.

The government and companies around the globe are taking preventive measures to address the epidemic. This results in affecting the travel industry and its related industries, from hospitality to air, to cruise, and tour operators. The borders are closed and travel is being prohibited. For instance, Saudi Arabia temporarily suspended the entry of individuals for pilgrimage visits in Mecca and Madina. The visas of tourists traveling from countries affected with coronavirus stand canceled (Mahmoud, 2020). President Trump suspended all visas on travel from Europe to the United States for the next 30 days (Liptak & Vazquez, 2020). Cancellations have hit Italy's tourism industry, which accounts for 14 percent of GDP (Subacchi, 2020). According to Italy's tourism federation, 90 percent and 80 percent of Rome's and Sicily's hotel and travel agency bookings for the month of March have been respectively canceled. All the landmarks of Italy are shut for the tourists to slow down the dispersal. The lockdown measures in Italy are reducing the economic output by around 10-15 percent and the tourism and transport sectors are down to about 90 percent from their normal levels (Amante & Balmer, 2020). Apart from tourism, the other industries affected include manufacturing, construction, retail, and hospitality is huge. It has also crushed the supply chain (The Economic Times, 2020). The retail and wholesale sector employs nearly 4 million people denominating about 15 percent of jobs. They also contribute about 12 percent of GDP. About 1.7m people are employed in the accommodation and food industry and this sector could suffer a 75 percent fall (Ghiglione, Romie, & Hall, 2020).

Tourism is not confined to hotels and hospitality but also to other sectors like transport, food, energy, clothing, education, medical industry, and spirituality as well which consistently contributes to the world economy.

### **Hotel Chains response to the crisis and their Financial impact**

The Corona Virus has shaken the tourism industry of the world, with hotel chains and digital platforms booking being forced to cancel reservations in the Asian countries. Hotels have shut their doors for guests across the country, resulting in negative revenue for all travel-related industries. Radisson Hospitality has closed its hotels across the world. Hilton has closed about 150 hotels totaling 30,000 rooms in China, Wyndham Hotel & Resorts shut 1,000 hotels in China. Nearly 70 percent of Wyndham's Chinese hotels remain closed. Hyatt has closed 26 hotels in Greater China (mainland China, Macau, Hong Kong, and Taiwan) while the ones open are running at very low occupancies.

### **Covid-19 and Transport Industry:**

According to The International Air Transport Association (IATA), the income made by the global air transport will shrink by 5 percent in 2020, i.e. 29.3 billion dollars less. The Organization of the Petroleum Exporting Countries (OPEC) reduced the global demand of oil to 19 percent which is 100.73 million barrels daily. The tourism industry has become an uncharted region with substantial losses. The global terror of the Covid-19 has led the share market to collapse which has affected all major airlines, operators, and hotels. The tourism business faces an unprecedented series of threats which are: a universal health alarm; the social demonization of travel; the scarcity of airplanes due to the crisis of the Boeing 737 Max; climate calamities; insolvencies of operators and airlines; volatile political conditions and slowdown of the economy in the markets. These factors will lead to a global shrinkage in the tourism business (Travel Daily

News, 2020). On 9th March, Italy's government banned the country's 62 million people from traveling, except on grounds of health, profession, and duly certified. All citizens have been advised to stay indoors. (Henley & Giuffrida, 2020)

### **Food and Retail Industry**

Local food is one of the major attractions for many tourist destinations. But there is always a worry among the tourists regarding the hygiene aspect of the food. Tourists have a constant fear that foreign and unknown foodstuffs will harm their body which may hamper their tourism experiences. Hence they think twice before having the food as they do not want to spoil their quality time. (Cohen, 2004). The outbreak of Corona virus hurt these street hawkers and fast-food sellers. These businesses are now hard hit as they lack insurance or security for their businesses.

In India, the leading food sellers like Parle, E-grocer-Big basket, Grofers have been experiencing a case of panic buying. On average the sales have gone up to about 14-15 percent. The directive by the government to close offices (declare work from home), malls, schools, multiplexes, restaurants in cities like New Delhi, Kolkata, and Bengaluru has spiked the demand for consumable goods-grocers like Big-basket and Grofers have stated the increase in their sales by up to 100 percent. On-time delivery has become an issue for the online sellers, as some products like sanitizers, masks, as their stocks have dried up. Managing on-time delivery has become difficult. Deliveries have been delayed and some items such as sanitizers, toilet papers, tissue papers, floor disinfectant, frozen food, edible oil, sugar, tea, instant noodles, soaps, pulses, are quickly going off shelves in Mumbai Delhi-NCR, Thiruvananthapuram, Bengaluru, Hyderabad, Pune, Kochi, and Ahmedabad. (Inputs from Future Group, Grofers, Spencer's Retail and sellers on Amazon and Flipkart.) (Mukherjee, Bailay, & Shrivastava, 2020). As per the data compiled by John Hopkins University, as on 6th March 2020, about 1, 00,000

COVID-19 cases have been confirmed worldwide and around 260 people have been inflicted with COVID-19 in the USA. This panic-stricken situation has shown an effect on global supply chains. A surge in sales of emergency products (masks, sanitizers, hand wash bottles) has been seen in China, the US, Italy, and India. (Nielsen). Sales of pantry necessities, safety and sanitation items (oat milk, water, powdered milk products etc.) have also increased. This consumer rush to the stores has been labeled as "pandemic pantries", by the leading consumer research firm Nielsen. The sales of household masks shot 475 percent in the last week of February and the sales of sanitizers spiked up by 313 percent (Leonhardt, 2020). Restaurant & Bars, schools & universities, museums, sports centers, and all retailers apart from pharmacies and food shops have been closed across the whole country

### **Finance sector**

The impact of this global pandemic has sliced about one-third of the global market capitalization. Due to coronavirus, the Organisation for Economic Co-operation and Development (OECD) has reduced the global gross domestic product (GDP) growth projection by half for the year 2020. In just a span of a few weeks of the outbreak of coronavirus in India, the Indian equity market has entered the bearish phase with more than 20 percent cut in the benchmark indices. The increase in the spread of the virus has caused panic among investors (Nathan, 2020). The Foreign Portfolio Investors (FPI) withdrew Rs.37,976 crore on a net basis from the Indian markets in March. This has created a fear of global recession. During the period March 2-March 13, the overseas investors also withdrew a net sum of Rupees 24,776.36 crore from equities and Rupees 13,199.54 crore from the debt segment (Economic Times, 2020).

(Ramelli & Wagner, 2020) studied how the market reacted to the unexpected outburst of COVID-19 by examining the stock price effects. The telecom and healthcare industry was unaffected but transportation



and energy plunged. The US firms that were dependent on the Chinese market suffered a lot. In January i.e. the incubation phase, the investors appear to have started pricing in the effects of the virus. In the outbreak phase, i.e. February both international as well as Chinese stocks strongly underperformed. During the Fever phase, i.e. the last week of February and early March, the total market first slumped strongly and then entered a fluctuating pattern which explains the feverish and seemingly behaviourally-driven price moves. The investors were concerned about corporate debt and liquidity, signifying prevalent concerns that the health crisis would possibly evolve into a financial crisis.

Italy's Milan stock exchange has slumped 29 percent since Feb. 20 (Amante & Balmer, 2020). As Italy is under the euro zone's second-heaviest debt, its borrowing costs are also shooting up. The economy is on the brim of recession. Northern Italy being the country's economic engine, with per capita GDP of almost 35,000 Euros as compared to the national figure of 28,000 Euros and a 67 percent employment rate (against 59 percent countrywide). Economists expect a sharper shrink in the GDP in the first quarter of 2020. This would heave Italy into its fourth recession phase in just over a decade after output fell 0.3 percent in the last three months of last year (Ghiglione, Romie, & Hall, 2020). To lessen the impact, the government has thought of making banks to offer their customers a pause in their mortgage payments.

### Discussion and Recommendations

The number of confirmed cases and deaths continues to surge high and the numbers are changing every day. The outbreak of Coronavirus across the world has created havoc in the minds of people and is drastically causing damage to the global economy. An amicable partnership between the citizens, government, and all sectors can help abate the negative impact of coronavirus on the service sector. Improved education and awareness about the transmission of the virus should be made to avoid

panic among people. Unnecessary hoarding of necessities should be curtailed as it is leading to a shortage of supplies. Delivery personnel and staff working in the service industries need to be provided with required safety amenities while discharging their duties. An urgent need for public and private partnerships will ameliorate the situation and help in the recovery of all industries which are currently facing a crisis. Thus, our paper has focused on the effect of coronavirus on some of the service industries only and further research can be done on other service industries, other industries and various countries that have been badly hit due to coronavirus, like Iran, Spain and Germany.

### CONCLUSION

A neuro-fuzzy adaptive control system for a nonlinear dynamic object containing a compensator, regulator, and emulator based on the fuzzy Sugeno model is proposed. Algorithms for structural and parametric identification of the Sugeno model are developed. An algorithm for adapting the models of the compensator and the regulator in real time is synthesized, which is a combination of the algorithm for identifying the coefficients of linear equations and the method of back error propagation that determines the parameters of membership functions.

Thus, the combination of the positive properties of neural networks and fuzzy models allows us effectively solving the problems of control the complex dynamic objects in the conditions of uncertainty.

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