

## THE IMPLICATIONS OF COVID-19 ON HEALTH ECONOMICS - AN OVERVIEW

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### **ABSTRACT:**

**Purpose-** This paper is an analysis of the current COVID-19 scenario and its inevitable effect on the economies around the world. The aim of this study is to provide an overview and the implications of a pandemic to the health economics of any country irrespective of being developed or otherwise developing.

**Design/Methodology/Approach-**For the same, data has been collected through secondary sources likes articles, reports including online and offline data sources. The implications of the pandemic under political and economic repercussions, and its implications to the policy makers in the immediate future were studied and complied for the current study.

**Findings-** The study has brought forward a long-term assessments and speculations of the effects of the on going pandemic.

**Keywords-** COVID-19, economic implications, health economics, healthcare facilities, migrant workers, banking institutions, economic background, policy making.

**Paper type** – Descriptive research paper.

### **INTRODUCTION:**

As the age old saying goes ‘Health is Wealth’, the current pandemic tests the same within the constraints of medical resources, time, man force and the continuing search for a vaccine. World economies are at a standstill with scenarios and repercussions rippling worse than the recession of the last decade. A strong economy stands on the pillars of man-power, infrastructure, agriculture, and health services. With the current testing times the fault lines in health services investment has come forward as a major underwhelmed aspect of many economies and the demand for changing this scenario.

Health Economics deals with the universal desire for maximum value for money through clinical effectiveness and cost effectiveness of healthcare provision given the scarcity, choice and prioritisation of health resources. Through the concepts and application of ‘cost-effectiveness’, efficiency, and ‘opportunity cost’; health economics aims to inform and simultaneously improve decision making through the systematic and objective application of ‘applied common sense’. This presents a valuable mode of thinking for decision makers.

Health care cannot as such be treated as a single good or service. As various inputs are required for generating health from health services, a complied factor of doctor's time, hospital beds, drugs, equipment, and information collectively result in the delivery of medical care. The prices of these, individually determine the level of medical care sought and provided to the individuals, as well as the various sub services that are to be provided additionally. This array of medical services inputs implies that, if either the government or the insurance companies get involved in setting the price for the sub services offered under medical services, then they must also be aware of the potential of the mix used to change the response to the relative price change.

On March 11, 2020, the World Health Organisation (WHO), defined the international viral epidemic to have a global reach, thus, officially labelling COVID-19 as a pandemic. With well over six months since the declaration, nations have responded to the pandemic based on the knowledge and observations of the patients and the scientific data provided to them. As of November 2, 2020, infections have been reported from 216 countries and territories along with 2 international conveyances. Globally there have been 46,823,070 confirmed cases of COVID-19 (Figure 1 and Figure 2), which includes 1,205,321 deaths, as reported by WHO. Considering absolute values, the infections are high in USA (9,473,911), followed by India (8,229,322), Brazil (5,545,705), Russia (1,636,781), France (1,413,915), Spain (1,264,517), Argentina (1,173,533), Colombia (1,083,321), UK (1,034,914), and Mexico (929,392) (for an overview see table 1 and the map representation of the same). It has also been reported that most of the deaths reported were from the elderly age group, from which it can be inferred that the effective labour force population of nations worldwide could be negatively affected by COVID-19.

A typical epidemic is characterised by the widespread of a pathogen amongst a particular demographic community within a definite time frame, which after a few months will attain its peak infected people and as counter measures by the government in the terms of doctors and healthcare system are implemented, there will be a gradual fall in the number of infected individuals. When such a similar situation is reported from various nation during the same time frame it gets labelled as a pandemic. At a microeconomic level, the effects the pandemic was that of the modest kind but as nations closed down for periods longer than a month and with limited economy being opened up, a peak of negative output has set in. With the published mortality and morbidity statistics there is now an aggregate demand on one hand with an equally aggregate supply on the other, which is primarily due to lesser to nil people working in factories and offices. As authorities imposing nationwide lockdowns, limited movement and time limited business; all of which helped in limiting the spread of the virus but also acted as a contributing factor in negative GDP of countries. With many European nations facing the second wave of the virus and increasing numbers of infections, the pandemic has brought to the forefront the need to link macroeconomic analysis with health care analysis with subsequent increase in the healthcare expenditure of the country.

### **PROBLEM STATEMENT:**

Creating disruptions for the global health and community development, COVID-19 has successfully shifted the world's attention to the most important factors like health workers support system, deliverance of health services, organisations dedicated toward the cause of infectious diseases and the protection of livelihood. COVID-19 has poised a challenge in terms of access, supply chain logistics, safety and financial stress on health services like never before, thus bringing forward the health economics of countries to the limelight. It has compelled countries to acknowledge their fragility, and their dependence on the rest of the world; all the

while trying to sustain itself in a scenario of isolation, while at the same time responding to the global health threat. It has realised the importance of investment in research and development of therapeutical, vaccines and medical equipment and workers, so that such a crisis can averted in the future. Thus, a look into various success models of countries can shed light on the sustainability and better allocation of health resources in the long run.

Although countries are claiming that their health economics models have been performing at par, but the fact cannot be overruled that cracks are visible and that reforms and better models with multi variant inclusion is required for the future. The evidence supporting these models are mostly surrounded by uncertainty, as they have sought out to standardise the variables for communicating this uncertainty, which is further being backed bay behavioural sciences. Over the past few months both the media and policy makers have successfully made the general public aware of health economic terms such as the basic reproduction of disease and exponential growth, yet it has failed to convey the notion of opportunity cost which is a must as it will help people realise the false contrast between lives and “the economy in terms of gross domestic product”. Due to the scarcity of medical resources and its exponential rise of demand in the current pandemic situation, the ultimate trade-off has been made between health and wealth which was a continuous process with lesser consequences than the present. This has also brought forward prioritisation of some health resources more than the others. Health Economics alone cannot and should not be the sole reason for speeding up the scientific process neither should it be used for dictating certain groups. Health economics if utilised in the manner it should be will in the long run give efficient healthcare systems without the need to tweak the healthcare policies when and if required without making countries health sufficient.

### **ECONOMIC BACKGROUND OF THE PANDEMIC:**

As early as June the repercussions of the pandemic was clearly noted with the psychological effect on the demand side clashed with the supply chain disturbances in terms of immediate inputs and the behaviour of investors and policymakers along with the lack of manpower. Liquidity problems faced by firms contributed to global economic slowdown, along with the same problem faced by major banks worldwide also indicates the drastic output decline on various fronts. In March 2020, according to McKibben and Fernando (2020), a macro model with its various impact scenario predicting a negative real GDP outcome was predicted which has recently come to pass along with the multifold challenges posed by COVID-19 pandemic and the precursor of international recession.

At the initial stages of the pandemic, this demand effect was rather unaccounted for, but as seven months of multiple levels of economic shutdown, a serious effect and abrupt disruption in the balance sheet of companies and enterprises having limited working capital and short term debt maturities came to the forefront. This had very serious effect on some of the economic sectors, which made the output expansion of some sectors to come back to the old levels a bit of a task and thus an hinderance to their growth plan. Developing countries are now emphasising a stronger response from IMF, the World Bank and other regional banks.

Some of the steps taken by various countries to tackle the economic pressure of the pandemic can be enumerated as such. In UK, due to the BREXIT shock, it has lost its access to special medical programs offered by the EU. Also, UK has recorded lower hospital beds per inhabitants compared to their European counterparts. The Central banks of UK, US and EU, all had to reduce their interest rates in order to tackle the fiscal deficit and the economic strain put upon individuals at that time. Fiscal expansion packages were introduced in order to tackle the

liquidity problem and the weakening demand aggregate on the global front. While the Asian countries saw the pandemic as a health service challenge along with the economic direness of the situation and the political aspect of it, European nations and US saw it as an opportunity for strengthen their health policy, economic policy and sought international cooperation as a way to the already overloaded health infrastructure. In March itself most of the EU nations had closed down their borders. This had adverse effect on the supply chain of automobiles industry as trucks started piling up near borders and thus, came forward the second victim of the pandemic; the first being the tourism sector, which took the major hit so much so that countries depending on tourism as the major contributor to their economy had to roll out special financial aids for the same. In this respect Italy and Spain suffered the most, with meetings scheduled in these countries got cancelled and their automobiles parts export gets halted.

The pandemic had its adverse effects on the stock market too with stock prices diving downwards since March and continuing to do so. Thus, the most common and the most hazardous effect of the pandemic faced by affected countries are liquidity problems faced by the firms, demand slowdown and supply chain disruptions on a large scale.

The scale of economic downturn of OCED countries, as per the second quarter records, show that there has been an extreme economic downturn as compared to the same figures last year (Figure 3). Also, one comes to think that there is some sort of trade-off between the health of a nation and the economy of a nation. A graph was plotted depicting GDP along the horizontal axis and the confined COVID deaths on the vertical axis. Union comparison one can see that it is quite the opposite. Countries with most severe economic downturns (Peru, Spain, UK), were the countries with the highest COVID -19 death rates (Figure 4). Thus, it has been observed that countries who had managed to successfully tackle the pandemic have not only lower death rates due to COVID but also some of the best economic strategy also.

With respect to aging population, it has been noted that with increasing age so does the cost of health care cost for them. So politically, a government cannot simply ignore that social and economic group for its policies completely. It can be assumed that the supply shock came with the initial lockdown in China as production networks became distorted but when the European, Asian and American counterparts started implying the same, then began the demand shock. Such was the demand shock that it reduced the global demand of oil and gas which turned to be an international price shock when looked from the angle of a small open economy. It has now become clear that the damage to the international production networks cannot be individually healed through by individual country's national fiscal policy. In the long run a broader cooperation between the EU, Asian countries and the US will be beneficial. It was predicted that the inflation in the Eurozone could go as low as 1% in the latter half of 2020. So, with lower inflation rate and the not functioning of the tourism sector could and have resulted in problems for the air transportation and shipping sectors. This has brought about liquidity problems and with dependency on higher speeds on corporate spreads and reducing loan growths, it has halted economic development to the global front.

When a society have a broader health insurance coverage, the individual's life expectancy becomes higher than the society having fewer health insurance coverage. The pandemic is a challenge to the existing established approaches to health economics. Thus, it becomes crucial for policymakers to overlap health care analysis and macroeconomics- in the form of health economics - as the health sector in itself is big enough to singlehandedly effect a country's economy in a massive way.

Although countries are claiming that their health economics models have been performing at par but the fact cannot be overruled that cracks are visible and that reforms and better models with multi variant inclusion is required for the future. The evidence supporting these models are mostly surrounded by uncertainty, as they have sought out to standardise the variables for communicating this uncertainty, which is further being backed by behavioural sciences. Over the past few months both the media and policy makers have successfully made the general public aware of health economic terms such as the basic reproduction of disease and exponential growth, yet it has failed to convey the notion of opportunity cost which is a must as it will help people realise the false contrast between lives and “the economy in terms of gross domestic product”. Due to the scarcity of medical resources and its exponential rise of demand in the current pandemic situation, the ultimate trade-off has been made between health and wealth which was a continuous process with lesser consequences than the present. This has also brought forward prioritisation of some health resources more than the others. Health Economics alone cannot and should not be the sole reason for speeding up the scientific process neither should it be used for dictating certain groups. Health economics if utilised in the manner it should be will in the long run give efficient healthcare systems without the need to tweak the healthcare policies when and if required without making countries health sufficient.

### **POLITICAL AND FINANCIAL MARKET BACKGROUND OF THE PANDEMIC:**

With the onset of the pandemic, doubts rose amongst the investors both domestic as well as international, which ended the upward trend of the stock markets since February 2020. With the official downturn in mid-March, it halted the upswing of economies of countries like US, UK, China and the South Asian nations. Falling oil prices contributed to the destabilising of economic development in the UK and European nations, but in the US and other developing Asian nations economic growths dampened by not only failing oil and natural gas sector but also the aggregate demand and supply of tradable and non-tradable goods also played a crucial role. Even after US lowered their interest in the early 2020, its aim to stabilise the output growth turned out to be quite limited.

COVID-19 has also led to political instability in many countries, especially those where general elections were to be held in the latter half of the year or during the mid of the year. Such is the scenario that it was aptly pointed out by Bank for International Settlements' 2018 Annual Report that political instability in any country would result in their economic instability in the long run. One such example can that be of the BREXIT as it has turned out to be a political shock for the Eurozone nations. A study by Kadiric and Korus (2019) had the following findings regarding the corporate bond yields as the aftermath of BREXIT - while the base points of corporate bond yields were higher in the UK the same was not the scenario in the rest of the EU, even those bobs under higher maturity year and risk factor faced the same. The political disturbance has thus brought with it; higher corporate risk premiums, this in its wake leaves behind an underwhelming outputs and lesser job opportunities.

As the liquidity problem sets in, firms having fixed and variable costs with sales proceedings are failing primarily due to production issues and lesser demand scenario. This problem was tried to be mitigated through the help of government economic policy intervention wherein care packages were rolled out, tax payments were postponed, or government paid quasi-subsidy to tackle the issue of rising unemployment due to the pandemic (as announced by Germany). If we see in the Eurozone and OECD countries, the governments had adopted measures as early as March under which smaller firms with short term cash flow problems can directly under their

helping aid whereas insolvent firms, of course, should benefit from such government aids. This has in turn ensured that there will be a recession the latter half of 2020 but as demands pull up in 2021 firms can go back on track. With the high volatility of the stock market and its drastic decline of indices saw a broader margin call, in order for the investors to have more equity capital in banks that provide loans for such investments. This resulted in the selling of certain assets like gold, whose price fell sharply in mid-March.

### **IMPLICATIONS FOR POLICY MAKERS:**

Recession being the primary problem to be faced as the economic aftermath of the pandemic, it becomes paramount for governments to adopt expansionary fiscal policy, under which digital platforms must be include so that future opportunities to source inputs from both the supplier and the consumer side. There is now a need to study the role of health systems in the economy of a nation. Sadly, this had been neglected in International policies. Aspects such as effect of health on the effective workforce, productivity and entrepreneurship along with comparative international study would be helpful in the long run. More formalised pattern and cooperation in health resources and policy must be considered in the international policies of nations. Interdisciplinary research should be promoted in the field of efficient and innovative health systems with freedom to scientific organisations so as to create an international network for better sharing of knowledge and policies.

A systematic study should be conducted between health policies and macroeconomics with special emphasis on the links between the two of them and its effects keeping long-term development in mind. The increasing healthcare facilities among aging communities pose a major clink to the nations' health care policy. The problems faced by such community are conflicts in government funding especially in respect to whether government have policies with broader health care option or should it have broader pension plans for them. It still remains an open conflict that whether such a structural issue remain between the younger generation and the older generation.

It's a fact that there is a risk of logistics, pandemic risks between the manufacturing country and the consuming countries in the logistic chain when one considers economic globalisation. For this, such logistic chains could benefit from the Global Health Security Index created by the NTI/ Johns Hopkins University research group, which helps disseminating information regarding the health systems prevailing in countries and how investors could use this to better understand the risks in international production chains and individual considered countries.

One can say a pandemic brings with itself four major issue, viz., i) minimising diffusion - nationally and internationally, ii) how to effectively provide health care facilities to those who require it the most, iii) how to effectively and swiftly create a vaccine, iv) how to overcome the economic effect of the pandemic. Thus, international benchmarking becomes crucial and also such a benchmarking should be done by creating various benchmarking groups based on size of demographic per capita income, intensity of trade and FDI. The ultimate winners of the pandemic turned out to be the Information & Communication sector, Pharmaceutical sector, Health Equipment sector and Digital Entertainment sector. Countries with weaker score on the Global Health Index should persevere to modernise and consider better health facilities. Fiscal policies should now focus more on health system modernisation along with focus on having backup facilities for crucial medical chemicals for the pharmaceutical industry. With the pandemic another issue came forward in the form of lack of information dissemination, thus, a

demand for public broadcasting must be dealt with along with the authenticity of such information with cross reference from the source.

The pandemic has also seen the rise in demand for a better coverage in health insurances. Also among the various structural shifts and demands, the massive switch to work-from-home had a ratchet effect such that in a post pandemic scenario the demand for office space might decline which intern could lower the relative price of office buildings. Also, simultaneously there is a rise in ICT technology and telecommunication services which could lead to an overloaded device provider terminal thus resulting in a positive supply and demand curve the telecommunication sector.

### **IMPLICATIONS OF PANDEMIC IN INDIA - THE ECONOMIC IMPACT AND SOCIO-ECONOMIC CHALLENGES:**

A Joint report by WHO and World Bank, back in 2019, had warned us about the global lack of preparedness to a pandemic if its to occur in the near future. Little did they know that it would come to pass in 2020, and its perditions would all so true. With the pandemic transforming itself into a economic and labour market shock, its effect on various sectors remains to be profound with repercussions well into the first quarter of 2021. With stick lockdown and social distancing polices being rolled out as the most effective and cost-conscious method to check the spread of the virus, it has simultaneously led to the economic collapse and a Herculean task of flattening the caseload curve remains a critical concern as it will come with a hefty economic cost.

The GPD growth for India as predicted by RBI was estimated at 6.2% in 2019-2020. But after an evaluation by the International Monetary Fund (IMF), it was lowered down by 1.35 points to 4.8% for the same time period. Thus, it becomes important to observe that India was already in a slowdown GDP while entering the pandemic lockdown phase. This further created a sharp downfall in the coming months so much so that it is now a critical debate among economists fro the revival of an already slow growing economy.

The pandemic has hit the people of the lower socio-economic strata hard with disturbing visuals pouring in from various parts of the county showing labourers returning back to their native paces on foot or any means available. Remittance money to home country hit an all-time low during the pandemic. In fact, it is a disrupting fall by 23% in the second quarter itself. A statement issued by theWorld Economic Forum explains how migrant workers working abroad will be coping up with the lack of jobs or loss of their jobs by taking up low paying jobs and putting their life at risk by undertaking risky jobs, which would include living in sub-standard living and working conditions and also restricting their expenditure.

The pandemic is likely to effect India in three ways, viz., i) rise in poverty, ii) widen the gap in socio-economic inequalities resoling in distorted health and nutrition indices, and iii) compromising health advisory measures (use of masks, social distancing, seeking medical advice in case of cough and fever etc.) The health sector which now is working on fumes due to lack of manpower and medical care infrastructure and resources, is facing a loss of 90% in terms of out-patient attendance, elective surgeries and international patients.

The society of India thrives on social interdependence within families as well as with the community. A common sight of living in crowded housing facilities, large families, social gathering, crowded public transport, crowded places of worship, to name a few, all prove to be a deterrent to the guideline of “social-distancing”. The lack of systematic and organised provision distributions for communities hit hard by the pandemic is a troubling aspect for itself. This has resulted in the increase of malnutrition cases among the lower social economic strata.

## **CONCLUSION:**

With the unexpected and drastic effect of COVID-19 on economies worldwide, its short-term implications are evident to the plain sight with its long-term consequences taking shape with the passage of time. Another outcome from the kaleidoscope effect of COVID-19 is that it has brought down the great divide of North-South paradigm. China and South Korea who were the aid recipients from the World Health Organisation have now become the major fund providing nations to the WHO and countries like Italy and European nations have seen themselves on the receiving end of the aid. On the other hand, this health crisis has brought together the developing nations together to fight against the common enemy. It has brought out an aspect of radical development to the forefront and has brought back concepts such as societal helping, solidarity as self-interest, international cooperation and multilaterals. Community based models are now sought after as governments are prioritising resource allocation and focus on the severe affected. A re-examination of health architecture is the call of the moment, this includes the need for manufacturing health commodities and stronger supply chain between the materials needed and the materials manufactured. As was the trend before, COVID-19 has emphasised on the adequate expenditure on health care and pay to health shrike providers and workers. There is a unified call for global health model and security for the future with flexible and stronger healthcare services and greater integration of economies worldwide.

As far as health indicators are concerned a massive leap has been seen in the last 50 years in the major health indicators. Statistically health of the society at large has improved with people living longer, various serious diseases has been controlled with some being eliminated and lesser children and mothers dying in childbirth. But yet a stark difference can be seen between the developed countries and the developing countries with the later having individual health potential well below the normal and the lack of readily accessible health care services and facilities.

When looked carefully the economy of any country effects the health of the citizens and health care services in three-fold manner. Firstly, with increasing economic opportunities the citizens are motivated to invest in their health. Secondly, the small policy details that are enclosed in the fine print has a manifold effect on the economic insurance coverage and costs. Another incentive for stability of insurance exchanges would be creating policies that address the potential f adverse selection of the insurances Lastly, with progressing economies comes forward the need and direction of government incentives which - negative or positive - either way harnesses to improve the overall health of a nation. A strong public health always will triumph over economic hardships in the long-term resulting in strengthening of the economy.

Industries from at the expense of agriculture in terms of both employment and value addition, this in turn creates a niche for the service sector in the economy. With increasing urbanisation, societal tradition turns less important and changes in income can be seen. So, it can be inferred that when a country aims towards economic development, its economic and social organisation changes thus, making the need for dynamicity becomes the core of the various sectors. With such dynamic changes, its effect on health outcomes and demands becomes ambiguous. In spite of this effect on health development, it can be said that there is a general positive relationship between the economic stage of development of a country and its population health status. This is a resultant of the demographic transition, which occurs due to the improvement of individual health, resulting in long life and streamlined structure of health facilities, giving a sense of economic security in the long run.



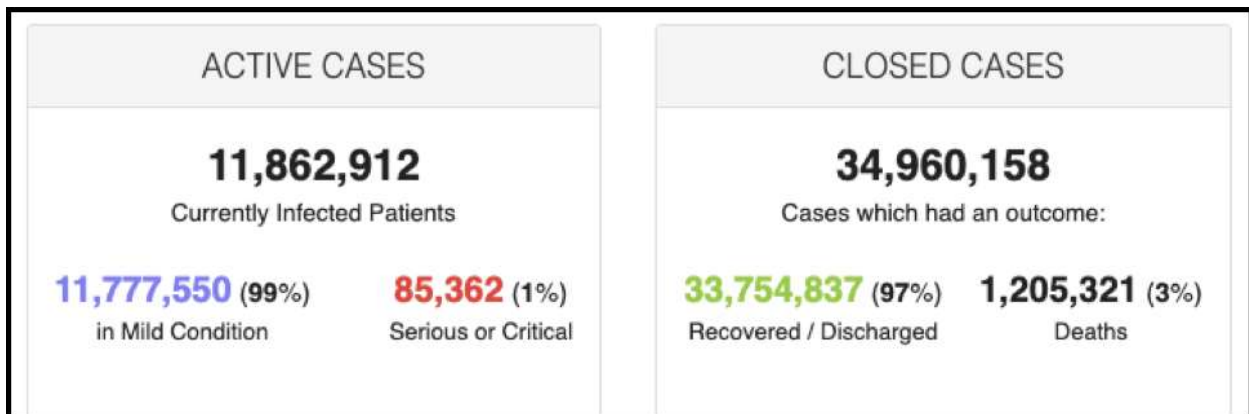
**FIGURES AND CHARTS:**

**Figure 1:** - COVID-19 statistics as of November 2, 2020.



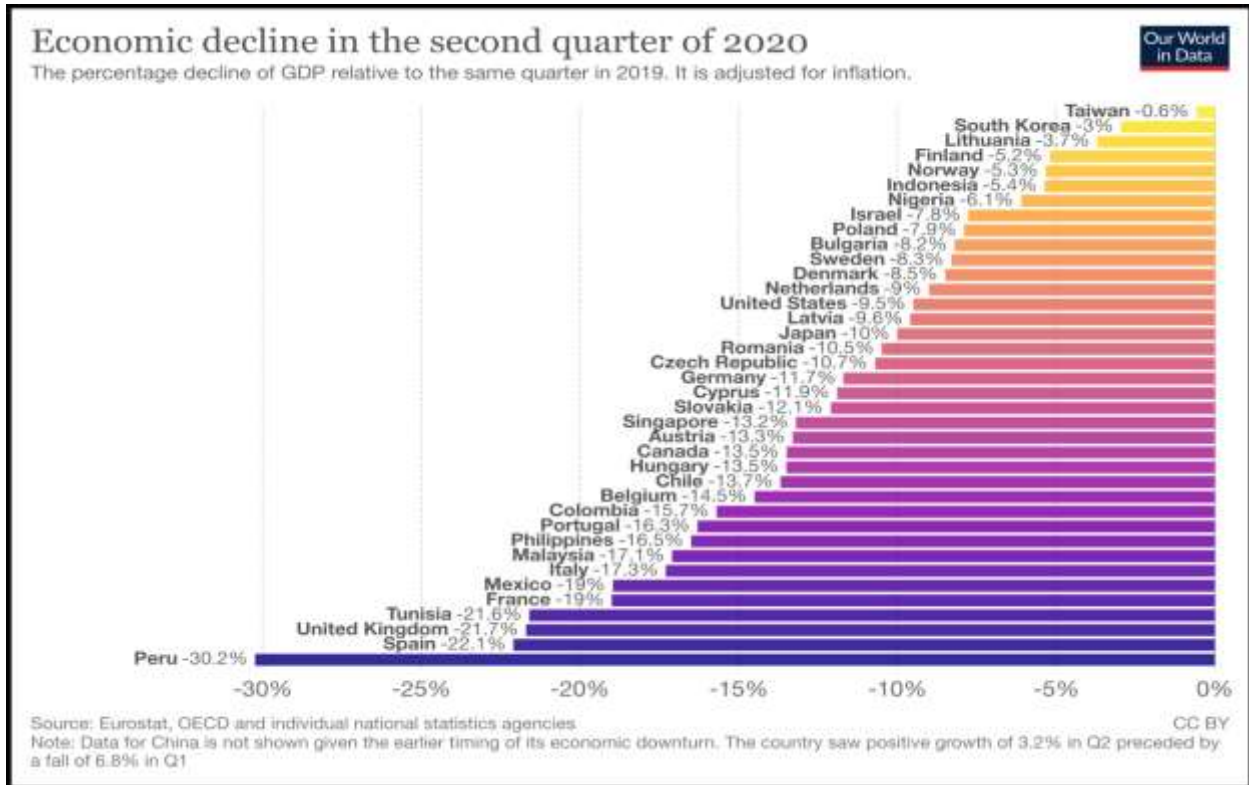
[Source: Eurostat]

**Figure 2:** - Breakup figure 1 into active and closed cases



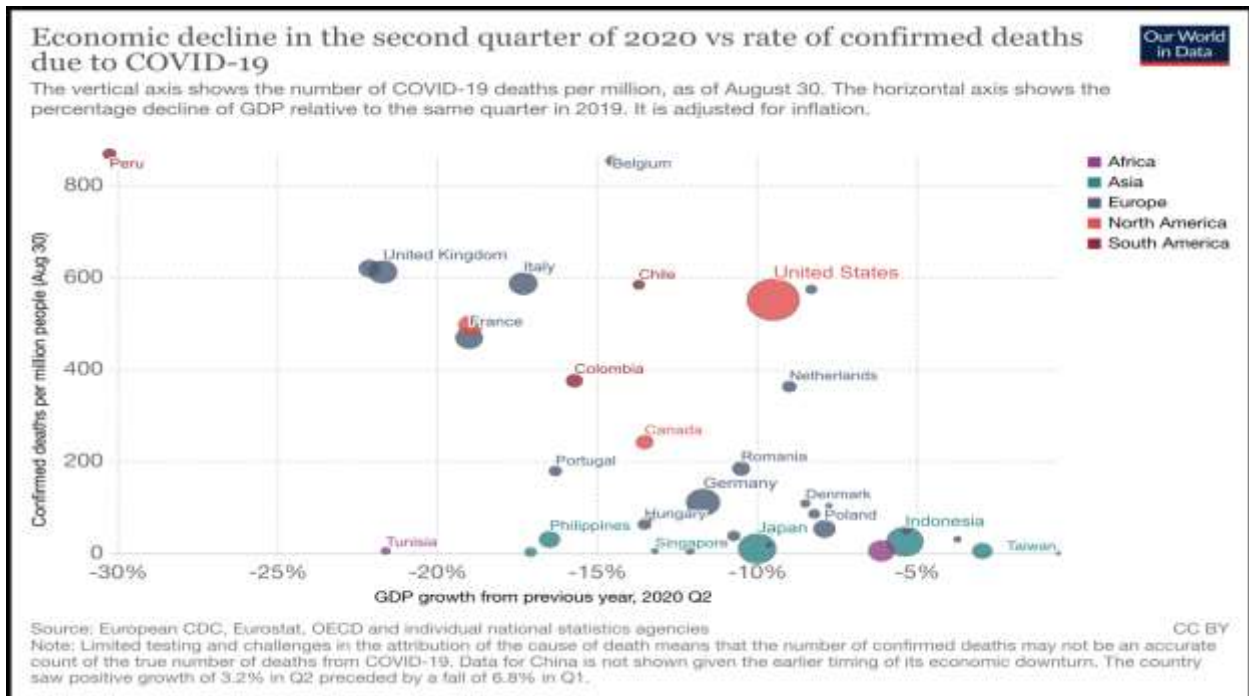
[Source: Eurostat]

**Figure 3:** - Graphical representation of economic decline in the second quarter of 2020.



[Source: Eurostat]

**Figure 4:-** Graphical representation of economic decline and confirmed deaths due to COVID-19



[Source: Eurostat]

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