**Economic Impacts of Covid-19 [Sri Lanka]**

**Objective:**

“Find the best solution whether to Contain the disease or sustain normal economic activities of Sri Lanka using the available social media data”

**Structure of the Study:**

1. Understanding the Global and Sri Lankan Economic Impacts of COVID 19

2. Local Economy with or without curfew / lockdown using social media

3. Practical situations and ethical behavior of the current options according to the social media

4. Understanding the best options using the big data and data mining techniques

5. Find and utilize a suitable algorithm to achieve the best sufficient output for the available set of data.

# Introduction | Background

# Areas on this document,

# Understanding the Global Economic Impacts of COVID-19

1. Sri Lanka Economic Impacts of COVID-19
2. Most Affected Economic Areas from the Covid-19 in Sri Lanka

# Understanding the Global Economic Impacts of COVID-19

Confirmed cases of the novel coronavirus (COVID-19), which first appeared in China at the end of last year, [now exceed 2,000,000 (Two Million)](https://www.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6) as of April 16th and are likely to climb significantly higher. Even though it started from China now vast majority of new cases reported since February 25 have occurred outside the country which is over one-third of the total confirmed cases are from USA. What was initially seen as a largely China-centric shock is now understood to be a global crisis. The virus’s spread has regrettably borne out analysts’ downside scenarios, with investors digesting the implications of disrupted supply chains, official containment measures, and spillovers from the real economy to financial markets. A decision by two of the world’s largest energy producers to maintain current levels of production, despite falling energy prices, has further unnerved investors while questions about governments’ abilities to mount an effective and coordinated response linger. The increased uncertainty has led to financial market volatility last seen during the global financial crisis.

Scientists do not yet have a clear understanding of the virus’s behavior, transmission rate, and the full extent of contagion; uncertainty will be part of the backdrop for the foreseeable future. Coherent, coordinated, and credible policy responses provide the best chance at limiting the economic fallout from what is already and sadly a human tragedy.

1. **What will be the impact of COVID-19 on the economy?**

The extent of the damage will depend on how quickly the virus is contained, the steps authorities take to contain it, and how much economic support governments are willing to deploy during the epidemic’s immediate impact and aftermath.

Early indications of COVID-19’s impact on the Chinese economy are worse than initially forecast. Surveys of China’s [manufacturing](https://www.reuters.com/article/us-china-economy-pmi-factory-official/china-february-factory-activity-contracts-at-record-pace-as-coronavirus-bites-idUSKBN20N03R) and [services](https://www.reuters.com/article/china-economy-pmi/chinas-services-activity-plunges-as-virus-wipes-sales-caixin-pmi-idUSZRN0008L4) sector plunged to record lows in February, automobile sales sank a record [80 percent](https://www.bloomberg.com/news/articles/2020-03-04/china-car-sales-drop-a-record-80-as-virus-adds-to-industry-woes), and China’s exports fell [17.2 percent](https://www.scmp.com/economy/china-economy/article/3074060/coronavirus-chinas-exports-and-imports-plummeted-january-and) in January and February. The official data confirmed a widespread slowdown in economic activity foreshadowed in [low pollution levels](https://www.bloomberg.com/news/articles/2020-03-04/pollution-data-shows-china-s-uneven-economic-recovery-from-virus) and [depressed shipping traffic](https://www.scmp.com/business/companies/article/3051784/shipping-lines-face-troubled-waters-oil-tankers-container), among other informal barometers. China’s economic recovery will be challenged as demand from other countries drops as they cope with the virus.

Although the outbreak appears to have [slowed](https://www.reuters.com/article/us-health-coronavirus-china-toll/china-reports-zero-locally-transmitted-coronavirus-cases-outside-hubei-idUSKBN20W00Y) in China, COVID-19 and its impacts have gone global. [Infections are mounting](https://www.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6) in Europe, South Korea, Iran, the United States, and elsewhere, with authorities implementing [increasingly restrictive measures](https://www.politico.eu/article/italy-orders-total-lockdown-over-coronavirus) to contain the virus. [Europe](https://www.nytimes.com/2020/03/09/business/europe-recession-coronavirus.html) and [Japan](https://www.japantimes.co.jp/news/2020/03/09/business/economy-business/japan-gdp-recession/) are likely already in recession territory given their weak fourth quarter performance and high reliance on trade. While the United States entered the crisis with a [tailwind](https://www.bls.gov/news.release/empsit.nr0.htm), [some analysts](https://www.wsj.com/articles/the-virus-aftermath-wont-be-like-a-hurricane-11583529896) are forecasting a contraction in U.S. GDP in the second quarter.

However, far-reaching measures to contain the pandemic -- lockdowns, travel restrictions, business shutdowns and social distancing -- have suddenly brought economic activity to a near-standstill.

The IMF says Europe *the epicenter of the pandemic* has been particularly badly hit. Economic contractions of 7.5 percent are expected in the euro zone's 19 countries, and 6.5 percent in the United Kingdom.

1. **What sectors and economies are most vulnerable?**

The COVID-19 outbreak has generated both demand and supply shocks reverberating across the global economy. Among major economies outside of China, the OECD [forecasts](https://read.oecd-ilibrary.org/economics/oecd-economic-outlook/volume-2019/issue-2_7969896b-en#page1) the largest downward growth revisions in countries deeply interconnected to China, especially South Korea, Australia, and Japan. Major European economies will experience dislocations as the virus spreads and countries adopt restrictive responses that curb manufacturing activity at regional hubs, including in Northern Italy. As a result of depressed activity, the United Nations [projects](https://unctad.org/en/pages/newsdetails.aspx?OriginalVersionID=2299) that foreign direct investment flows could fall between 5 and 15 percent to their lowest levels since the 2008-2009 global financial crisis.

At the sectoral level, tourism and travel-related industries will be among the hardest hit as authorities encourage “social distancing” and consumers stay indoors. The International Air Transport Association [warns](https://www.iata.org/en/pressroom/pr/2020-03-05-01/) that COVID-19 could cost global air carriers between $63 billion and $113 billion in revenue in 2020, and the [international film market](https://www.vulture.com/2020/03/coronavirus-will-have-disastrous-effects-on-movie-business.html) could lose over $5 billion in lower box office sales. Similarly, shares of major hotel companies have [plummeted](https://www.wsj.com/articles/coronavirus-slams-u-s-hotel-industrys-global-operations-11583236802) in the last few weeks, and entertainment giants [like Disney](https://www.cnbc.com/2020/02/04/disney-to-take-175-million-hit-from-the-coronavirus-outbreak.html) expect a significant blow to revenues. Restaurants, [sporting events](https://www.espn.com/soccer/italian-serie-a/story/4071104/serie-a-all-sport-in-italy-expected-to-be-halted-due-to-coronavirus), and other services will also face significant disruption. Industries less reliant on high social interaction, such as agriculture, will be comparatively less vulnerable but will still face challenges as demand wavers.

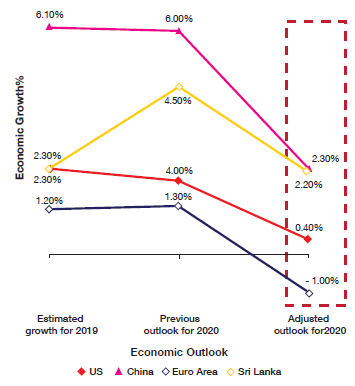
1. **How does the economic slowdown impact financial markets?**

Fears of a broader outbreak and its economic impact spread to financial markets last month, and most international indices are nearing bear market territory as investors process the lower corporate earnings that will result from the virus. The S&P 500 fell 7 percent to open the March 9 session, triggering a “[circuit breaker](https://www.wsj.com/articles/traders-closely-watching-circuit-breakers-thresholds-11583761223?mod=article_inline)” that briefly suspended trading for the first time since 1997. Overall, the index is down about 17 percent from its record high on February 19. Amid the equity rout, investors have fled to [safe haven assets](https://www.cnbc.com/2020/03/09/forex-markets-yen-oil-exposed-currencies-in-focus.html) such as U.S. Treasury bonds, leading to [record low yields](https://www.wsj.com/articles/long-term-u-s-treasury-yields-hit-record-lows-11583151460). Low yields translate into low borrowing costs for the U.S. government, but low interest rates may not benefit private companies or individuals who may find financial markets too risk adverse to extend credit in light of such uncertainty. The longer the virus spreads, the more economic and company performance will be impacted, raising concerns about debt sustainability, especially for highly indebted countries and companies, absent official support.

1. **How have governments responded to cushion the economic fallout from the epidemic?**

Thus far, national governments have announced largely uncoordinated, country-specific responses to the virus. In China, the epicenter of the outbreak, officials announced billions in [special-purpose loans](https://www.uscc.gov/sites/default/files/2020-03/March%202020%20Trade%20Bulletin.pdf) to companies facing liquidity constraints as well as financial support to specific sectors such as aviation. In the United States, the [Federal Reserve](https://www.federalreserve.gov/newsevents/pressreleases/monetary20200303a.htm) cut the policy rate in an emergency action on March 3, and on March 9, in coordination with other U.S. bank regulators, it [encouraged](https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200309a.htm) financial institutions to “meet the financial needs of customers and members affected by the coronavirus,” a move aimed at supporting financial conditions to prevent the growth shock from turning into a broader financial crisis. On March 9, the Federal Reserve Bank of New York also announced expanded [overnight repurchase operations](https://twitter.com/NewYorkFed/status/1236975982541758466) by $50 billion to avoid a deeper credit crunch.

The European Central Bank and Bank of England are [expected to take action](https://www.cnbc.com/2020/03/04/ecb-and-boe-to-take-immediate-policy-action-on-coronavirus-impact.html) when their monetary policy committees meet later this month. On the fiscal front, President Trump previewed his administration’s plans to seek a payroll tax cut and assistance for impacted hourly workers and industries. Countries announcing fiscal measures just this month include [Japan](https://english.kyodonews.net/news/2020/03/a313cff1eb57-cabinet-oks-bill-to-enable-abe-to-declare-emergency-amid-virus-spread.html) ($9.6 billion, or 0.19 percent of GDP), [South Korea](https://www.straitstimes.com/business/economy/south-korea-unveils-137b-stimulus-package-to-fight-coronavirus) ($9.2 billion, 0.56 percent of GDP), and [Italy](https://www.ft.com/content/a6f59348-5bae-11ea-b0ab-339c2307bcd4) ($4.1 billion, 0.20 percent of GDP). The adequacy of such spending will depend on the virus’s path as well as the effectiveness of other measures to contain negative spillovers from the growth shock.

**Sri Lanka Economic Impacts of COVID-19**

Based on the latest PMI data in Sri Lanka as of February 2020, Manufacturing PMI marginally slowed by 0.4 basis points due to a contraction in new orders and employment in the manufacturing sector.

Meanwhile, Services PMI recorded a 6.8 basis point drop owing to reduction in new businesses, business activity and expectations.

Furthermore, Sri Lankan manufacturers and service providers expect this trend to worsen with the imposition of travel restrictions and work from home periods in Sri Lanka. This will be further exacerbated by the increasing disruptions to people and goods movement seen across the work with measures taken to contain the spread of COVID-19.

Estimating the impact COVID-19 will have on economies is a challenge. Simply, there are too many unknowns such as rate of infection and immunity, policy response, demand-supply dynamics, reaction of firms etc.

Figure : The expected economic downturn due to Covid-19 outbreak

However, we think analyzing various scenarios still adds value in this environment of limited visibility.

Prior to the Coronavirus outbreak, the Central Bank of Sri Lanka (CBSL) expected the economy to grow at 4.5-5% with a modest recovery from the Easter Sunday attacks in April 2019 and the political stability after the Presidential elections. However, given the increasing economic consequences from the Coronavirus pandemic, these growth target will likely be difficult to achieve.

Based on the ADB’s outlook as at 03 April 2020, the **Sri Lankan economy is expected to grow at 2.2% in 2020.** If the pandemic is contained by mid-2020, the economic recovery could begin towards the latter part of the year.

According to studiesIf the pandemic is contained by mid-2020, the economic recovery could begin towards the latter part of the year. We expect real GDP growth to be less than 2% this year.

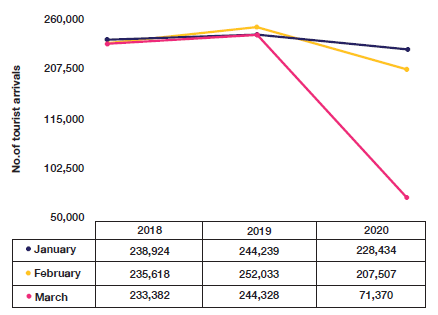
The outbreak is likely to affect private sector business sales and investment through most of 2020. This is further evident from the movement in the All Share Price Index (ASPI) of the Colombo Stock Exchange. From the date of the first confirmed case in Sri Lanka (28 January 2020), the ASPI plunged by more than 20% as at 31 March 2020 to an all-time low during the past five years. The fall in investor sentiment globally, along with their own home country challenges faced, will negatively impact prospects for attracting foreign direct investments to or in to Sri Lanka during 2020.

Based on the data provided by the Central Bank of Sri Lanka for the week ended 03 April 2020, the Headline and Core inflation of the Colombo Consumer Price Index (CCPI) showed a decline in March 2020. Based on higher food prices owing to a tighter supply conditions and supply-chain disruptions is expected to drive inflation. However, weak demand and lower indirect taxes, are likely to counter inflation pressures.

The current account deficit is expected to widen with the anticipated decline in exports, tourist earnings, and remittances. Export will weaken in 2020 due to reduced sales, especially to Europe and the US, key markets for garments, tea and rubber products. However, reduction in global oil prices, weak demand and restrictions on imports for vehicles and non-essential consumer items may offset some of the adverse impacts from the decline in Exports.

Meanwhile, since the start of the year, the Sri Lankan Rupee depreciated against the US Dollar by approximately 9% as at 6 April, 2020.

**Most Affected Economic Areas from the Covid-19 in Sri Lanka**

**1). Tourism**

With disruptions to global travel and restrictions issued to some countries due to the pandemic outbreak, Sri Lanka’s tourism industry will be significantly affected. Based on the Sri Lanka Tourist Development Authority Data, tourist arrivals fell below over 30%, during the first quarter of 2020, compared to the previous year.

We will see a further impact from April onwards as the Sri Lanka closed its borders for non - essential passenger travel and domestic travel restrictions have also caused a virtual standstill in the tourism industry. However, this will likely to be greater if the public health measures continue.

Figure 2: China drops out from Sri Lanka's top 10 tourist source markets for the first time since 2012

**2) Apparel and textile**

Apparel and textile are one of the highest contributors towards national exports with over USD 5 bn in export revenues. Based on the PMI data as at February 2020 provided by CBSL, “New Orders” and “Employment” slowed down, particularly in the manufacturing of textile and wearing apparel sector with the decrease in global demand. The Coronavirus outbreak has affected major export destinations of Sri Lanka such as Italy (one of the largest procurers of textiles and garments).

Furthermore, raw material imports have been delayed due to supply side disruptions due to the pandemic outbreak. Hence, enterprises foresee a decline in manufacturing in the short term.

**3) Construction and engineering**

Several high-rise building projects had showed slowdown owing to the delay in procurement of materials from China and the complete stoppage of work due to the curfew. Based on the Construction industry experts, although the Chinese government has allowed factories in many industrial centers to open, the recovery is expected to take more time. In addition, the lockdown of construction workers after the Chinese New Year also adversely affected the industry, as many construction projects are undertaken by Chinese contractors.

The slight recovery of demand for middle income apartments seen earlier this year is likely to be offset by the current and expected economic downturn; as well as the delays caused by work stoppage. Investor sentiment is likely to be depressed throughout the remainder of the year.

**4) Retail and consumer**

Social distancing measures come at a great economic cost especially for the Retail and Consumer sector. Despite the lifting of the indefinite curfew in March 2020 and the panic buying seen earlier this year we still expect the retail and consumer sector to slowdown, given the prolonged period of curfew. However, we have seen Public Private Partnerships to provide essential household and consumption items to the public during this indefinite curfew period.

During this time, it is likely that retail and consumer products in relation to Essentials (e.g. groceries) will strive to keep supply lines moving. This is further evident with many retailers now relying on alternative methods such as limited deliveries during a given time to continue their business activities. Demand for clothing, white goods and consumer durables will slow down. Import restrictions may further dampen retail activity.

**5) Banking and finance**

Since the banking sector is the backbone of any economy, any significant economic downturn will directly affect the banks. Due to difficult operating conditions, the performance of the banking sector, will be more challenging, affecting asset quality and profitability recovery. The six-month debt moratorium and other measures imposed is expected to soften the impact to individuals and businesses but will increase non-performing loans in 2020.

Furthermore, according to Fitch Ratings, the outlook for Sri Lanka’s banking sector is negative for 2020. Financial sector liquidity will be impacted by the debt moratoriums although offset to some extent by the reduction in the liquidity requirements for financial institutions. The need to strengthen the capital of NBFIs will be felt even more as they need to have the financial capacity be able to navigate crises such as this.

**Reference:**

[1]. “COVID-19: World economy in 2020 to suffer worst year since 1930s Great Depression, says IMF”, Euronews with AP

[2]. “COVID-19 Outbreak: Impact on Sri Lanka and Recommendations”, PwC