
Understanding COVID -19 Theoretically through Bull Whip Effect and the Consequent Indian Economy

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Abstract

COVID-19 is spreading not only human suffering worldwide but the Economic suffering too. Worldwide economists are trying to answer how, and how far and fast, will the economic damage spread? How horrific will it be? How long will the damage last? What will be the feasible mechanisms to mitigate the economic contagion? And, above all, what can Governments do to restore the situation? And India is not an exception to it. In this paper we are trying to understand the Covid 19 in the background of established economic theories and consequent Indian Economy.

Keywords: Economic, corona, damage, mitigate, distancing, lockdown, industries.

Introduction

In India first case of pandemic corona was identified in the state of Kerala on 30th January 2020, since then as on 13th May,2020 active cases in India was 47,480, with 46,008 and 24,385 have been cured/discharged patients. As many as 2415 people have died and one was migrated. The recovery rate in the country stands at 31 per cent [1].Under this scenario we can predict only and as economists we have a bad track record in predictions, so we will not try our hand at predicting the numbers. Rather, we would like to offer some ideas on what might be the consequences on economy during lockdown and consequent days if lockdown does not extend. It

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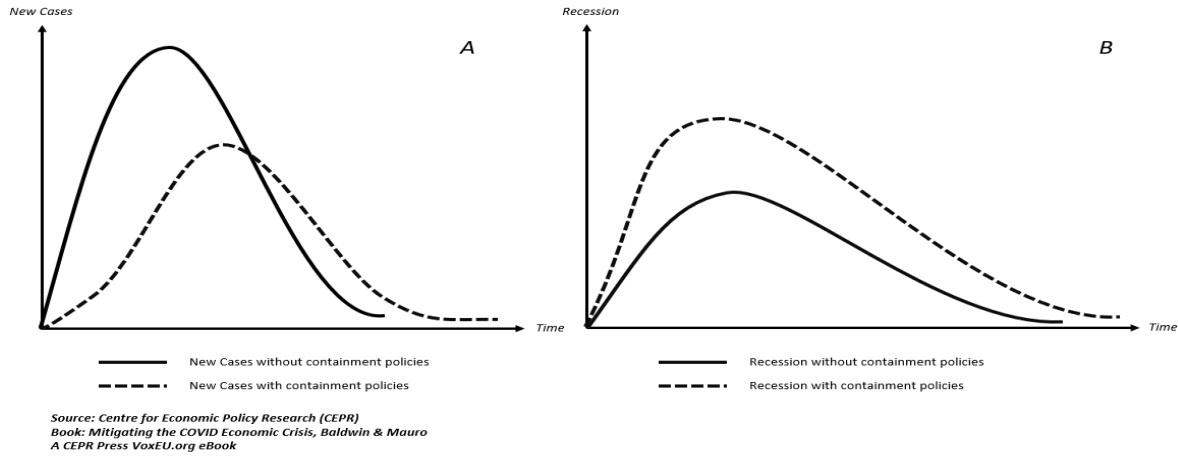
is certain that in case of extension, severity of the situation may intensify. Ever since the spread of COVID -19 influenced the equity market and share markets all over the world and India, global financial markets had declared overwhelmingly it as a pandemic .They did this through the fastest equity market corrections of all time that took place in about six to seven days, where a correction is defined as at least a 10% drop from the [2]. On the other hand “ UNCTAD, the UN trade agency, warned of a slowdown of global growth” to fewer than 2% this year, effectively wiping \$1 trillion off the value of the world economy”[3].

Before the Covid-19 outbreak, the Indian economy was one of the fastest-growing economies of the world (According to the International Monetary Fund). However, due to the Covid-19 breakout and subsequently lock down, the economy is on the back foot and obviously, the effect of the virus on the Indian economy will depend on (1) disciplined behavior of population during the lockdown and social distancing period (2) how much further the virus will spread across the country and its effect on economic activities, and (3) fiscal and monetary policy reactions to the shock. In the above background, we are sure that the country is to pay a heavy economic cost in the coming months. We don't have latest data regarding demand and supply commotion but on the basis of observation and past experiences we are trying to analyze the situation in this piece of write-up.

Trade off between Containment Measures and Recession

We must agree that containment measures are the only way to mitigate the effect of Coronavirus. “In containment environment, such as lockdown, social distancing, work closures in industry and service sector will reduce the economic activities and thus flatten the epidemic curve as shown in panel A with dotted curve. The dotted curve is a flatter version of the solid curve due to containment policies measures.

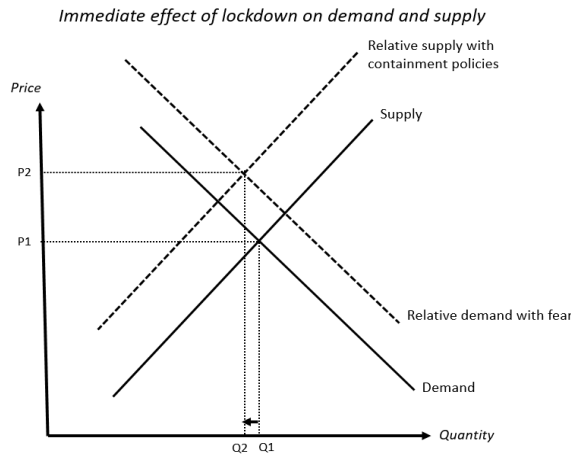
In the bottom panel, the solid curve represents the economic loses without containment measures, which is less steeper and deeper than the dotted curve i.e. with containment measures. As Pierre-Olivier Gourinchas puts it: “flattening the infection curve inevitably steepens the macroeconomic recession curve.” [4]



The Two-Curve Problem

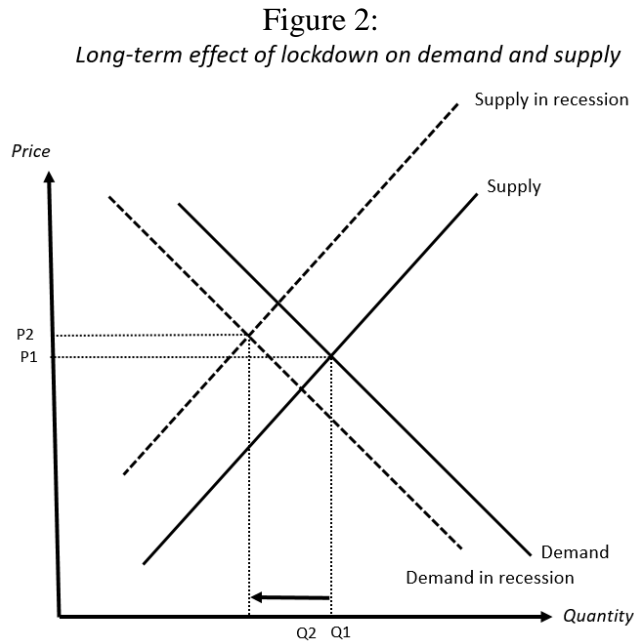
The suppression also has its own costs. The lockdowns mean closure of markets except supply of essential goods and services; employees cannot be at the workplace. Suppression of virus has already crippled a large range of economic activities across the industries from manufacturing to hospitality, tourism, transportation, entertainment, construction, real estate, retail and wholesale markets of consumer goods to healthcare, pharmaceutical, electronic goods to IT. The small firms and their employees, and contractual workers of big firms will be the worst hit beside entire informal sector of the economy. In addition to the demand reduction, there will also be widespread supply chain disruptions, as some people may stay at home, some may return to their native/villages, and moreover imports have been already disrupted. All of these may affect negatively on production in almost all industries. This has been shown through following two figures

Figure 1:
 Essential goods dilemma – high prices or less availability



Source: Authors own perception

Governments are preventing workers from working (deepening the supply-side recession) and consumers from consuming (deepening the demand-side recession). The recession, in other words, is intentional and unavoidable.



Source: Authors own perception

Bull Whip Effect

The bullwhip effect is a distribution channel phenomenon in which forecasts yield supply chain inefficiencies. It refers to increasing swings in inventory in response to shifts in customer demand as one move further up the supply chain[5]. Still we are not able to understand the basics of epidemiology and having all the technology and experts we do not have some concrete idea of the dynamics of spreading diseases. Times of fear are also times of rumors and misinformation leading the economy to face Bull Whip Effect.

Supply Commotion

With prolonged lockdown and economic sudden stop situation manufacturing sector is worse effected what so ever is the size. All the manufacturing units except producers of essential goods come to a halt after the declaration of lockdown in the country. Supply-chain contagion will amplify the direct supply shocks as manufacturing sectors of the countries will find it harder and/or more expensive to acquire the necessary imported industrial inputs from the countries like China, USA, Germany, Italy where the economy/manufacturing sector is already in trouble due spread of this pandemic. Subsequently multiplier effect will worsen the situation of both types of countries the exporter and the importer. Ultimately significant disruptions in the global supply

chain, factory closures, and cutbacks in many service sector activities will have manifold effect on the economy.

Demand Commotion

Again with prolonged lockdown and economic sudden stop situation there will be demand commotion due to macroeconomic drops in aggregate demand, wait-and-see purchase delays by consumers and investment delays by firms at one hand, and tendency of over hoarding of essential commodities, particularly food items (grocery items), preservative milk product, and medicines etc. A decline in hospitality services, tour and travel services, restaurant and resort services and declines in education services, a decline in entertainment and leisure services aggravate the situation.

The Current Situation of Indian Economy

The former Chief Economic Advisor to the Government of India has said that India should prepare for a negative growth rate in FY21.[6][7] However, the International Monetary Fund projection for India for the FY 2021-22 of 1.9% GDP growth is the highest among G-20 nations.[8] Within a month, unemployment rose from 6.7% on 15 March to 26% on 19 April.[9] During the lockdown, an estimated 14 crore (140 million) people have lost employment.[9] More than 45% of households across the nation have reported an income drop as compared to the previous year.[10]

The Indian economy was expected to lose over 32,000 crore (US\$4.5 billion) every day during the first 21-days of complete lockdown, which was declared following the Coronavirus outbreak.[11][12] Under complete lockdown, less than a quarter of India's \$2.8 trillion economic movement was functional.[13] Up to 53% of businesses in the country were projected to be significantly affected.[14] Supply chains have been put under stress with the lockdown restrictions in place; initially, there was a lack of clarity in streamlining what an "essential" is and what is not.[15] Those in the informal sectors and daily wage groups are the most at risk.[16] A large number of farmers around the country who grow perishables are also facing uncertainty.[17] Various businesses such as hotels and airlines, are cutting salaries and laying off employees.[18]

What have been done so far?

On 12th May 2020 the Prime Minister of India announced the road map of exit plan from current lockdown through different programmes and policies with the five pillars Economy with potential for quantum jump, Infrastructure, Tech-driven system, Vibrant Demography, Intelligence-driven supply chain. And on the same announcement he announced an economic package of Rs 20 lakh crore, amounting to 10% of GDP, to India realise its full potential, by focusing on its self-reliance. On subsequent days Finance Minister of India is announcing different measures to compliance to the announcement of the Prime minister

The country is clearly migrating from merely battling a pandemic to bringing a paradigm shift in the economic affairs to build a self-reliant India. The vision outlined to make local products global, is a clear indication of shifting from Make in India to Be Indian-Buy Indian motto. While we await the finer details of the economic package, it was much needed in view of the unprecedented devastating human and economic consequences because of the pandemic

Many experts feels that “This is going to be a gamechanger,” said Vikram Kirloskar, Vice Chairman of Toyota Kirloskar and President of the Confederation of Indian Industries (CII). The CII had asked for a package of Rs 15 lakh crore, an amount it said was needed to alleviate the pain of the economy that has been in lockdown for about 50 days. The PM, who said the Rs 20 lakh crore figure will include steps already announced by the Government of India and the Reserve Bank of India so far, stated that details of the remaining amount will be announced by Finance Minister Nirmala Sitharaman shortly. [19]

Apart from fiscal and monetary measures Government of India has undertaken certain global initiatives. As International collaboration in this case is of utmost importance as beyond funding R&D, international collaboration could boost pandemic preparedness and can be shared and deployed where they are most needed. Indian Government has taken initiative among the SAARC countries members and also “pledged \$10 million toward a Covid-19 emergency fund and said it was putting together a rapid response team of doctors and specialists for South Asian Association for Regional Cooperation (SAARC) nations as part of an initiative led by Prime Minister Narendra Modi”. [20]

What to do Next (Exit Plan)?

It is very difficult at present to predict the exit plan but everyone is waiting to know about the country’s exit strategy. Unfortunately, there is not much information available on this. Before May 18, 2020, the Prime Minister may announce regarding this. However, most of the states are maintaining the partial lockdown on the basis of three different zones such as red, orange and green. As per discussion of Prime Minister of India with the state Chief Ministers on April 27th , 2020 ,it is clear that country will have to give importance to economy as well as to continue the fight against Coronavirus with a common consensus of strict restrictions to COVID-19 hotspots or red zone (A district/region with highest case load contributing to more than 80% cases of each state or a district with doubling rate less than 4 days), while curbs can be eased gradually in areas which are in green zone(A district/region which has not reported any case over 28 days). “However, some states preferred to maintain strict restrictions for fear of losing control, [21]

But here lies the problem what to choose the life or livelihood?. As all are desperate for the lockdown to end, but are we prepared for what would happen if it does? The problem is that nobody knows what to do. Even countries like China and UK are merely experimenting. Unfortunately, this is one case where science, too, is not of much help. Most countries are trying

to “flatten the curve” or reduce the number of cases through physical distancing and lockdown and maintain hygiene practices.

In a Nutshell

The upside is that we can take proactive steps to manage the risk of epidemics and mitigate their impact on the basis of the experiences of other victim countries. The numbers of corona infected persons are daunting day by day. Medical data changes hourly, so the strategies adopted by the different agencies take steps to control this epidemic.

However, in present scenario lockdown is essential to break the chain of spread of this virus benefitting every sections of the society but costs will be disproportionately higher for the poor and this section of society is neither having the any mode of working from home nor sufficient savings pool to exhaust while not earning. This means that the nation’s recovery from the impact of the epidemic would be more challenging, and the social and economic impacts of the epidemic may extend well beyond the end of the health crisis. In short Government must consider that beyond health, the priority should be on people.

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