



ECONOMIC IMPACT OF COVID -19 PANDEMIC IN INDIAN AND ELECTRICITY CONSUMPTION OF TAMIL NADU

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Abstract

This article explains the use of electricity for economic performance in India among other states. In March 2020, the Indian government issued the first lockdown to deal with the rising cases of COVID-19, and energy consumption in India dropped drastically. However, as the lockdown was eased, energy consumption in India and other states began to recover. In this study, we examine the impact of the COVID-19 crisis on Indian energy consumption during the COVID-19 crisis, examining whether changes to the lockdown had a positive impact on energy resources and electricity consumption and whether prosperous regions have recovered their energy consumption quickly enough. Using Autoregressive Distributed Regression (ARDL) model, the study shows that there is a long-run relationship between corona cases and energy consumption and that COVID-19 cases have a positive impact on Indian energy consumption. Due to the COVID-19 lockdown between March 2019 and 2020, electricity consumption declined by 9% per cent across the country, while it fell by 14% per cent in Tamil Nadu. that the decline in electricity usage for the entire lockdown period after May 3 may exceed 11,000 million units of electricity consumption. Tamil Nadu's average power consumption was 10,000 million units per month before the lockdown was announced across states and districts in Tamil Nadu. According to the data released by the Central Electricity Authority, the country's total electricity consumption was 1,08,355 million units in March 2019, but it came down to 98,404 million units in March this year.

Keyword: Covid-19 Lockdown, Electricity Consumption, Economic Impact.

Introduction

The COVID-19 pandemic has forced governments around the world to impose strict restrictions on daily life to contain the spread of the virus. With these restrictions in place, roads and

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airport railway stations are almost empty, shops and restaurants, all commercial places and market areas are closed, and industrial activities have largely come to a halt. Since a strict lockdown was imposed across India from 25 March 2020 to May 2020, a significant drop in electricity demand was observed, falling by about 20% to 40%. In contrast, this declining trend started reversing in May 2020. According to Pillar, the demand rate for energy depreciation has recovered from 22% to 17%, and demand from residential sectors has emerged higher than industrial demand in May compared to April. India's electricity consumption declined by 9.24% and 22.75% in March and April, but this decline in electricity consumption reduced to 14.16% in May. The Economic Times has suggested that this improvement in energy demand is related to the government implementing relaxations for economic activities and increased use of air conditioners as the temperature crossed 45°C in May. The country's electricity consumption fell by about 19% on 3 April 2020, and coal-fired power generation decreased by 26% in the two weeks just after the lockdown began, but electricity demand recovered in late May Because the lockdown was relaxed.

COVID-19 and the Global Economy

Globalization in terms of mobility, trade, travel and countries and the potential impact of COVID-19 on global health. The economic impact was measured in terms of event cancellations, food and agriculture, educational institutions and supply chains. Unprecedented times of COVID-19 and uncertainty about the economy where lockdown measures were implemented impacted growth. Uncertainty in the International Monetary Fund's (IMF) global growth forecast. It is expected to decline by 3 percent in 2020 and by 6.1 percent for advanced economies. Additionally, China's second-largest economy shrank 6.8 percent in the first quarter. The lockdown measures and telecommuting has increased, operations have been cancelled and supply and demand have been restricted.

COVID-19 and the Indian Economy

The economic impact of the COVID-19 pandemic in India has been widely disruptive. India's growth rate slowed down to 3.1 per cent in the fourth quarter of FY20, said the statistics ministry. According to the Chief Economic Advisor to the Government of India, this decline is due to the impact of the COVID-19 transition on the Indian economy. The ripple effect of the 19 pandemic and deferred demand covering India's purchasing power due to job losses or pay cuts will have long-term effects on other sectors, especially when demand in nature resources is discretionary and 19 people are struggling to survive. India's real GDP in 2019-20 fell to its lowest level in more than six years.

Impacts of COVID-19 in India

India reported the first confirmed case of COVID-19 in the state of Kerala on 30 January 2020, identified as a link with a travel history from Wuhan, China (believed to be the source of COVID-19). India has recorded over 0.2 million cases of COVID-19 (June 4th 2020 08:00 IST (GMT+5:30)) China has been replaced as Asia's hotspot (Government of India 2020). Since India

enters Lockdown 5.0 to reduce the rate. In view of the spread of COVID-19, the Indian population has been advised to strictly follow social distancing. Based on the prevalence of COVID-19 infections, the country's Over 700 districts are currently classified into red, white and green zones (Nair 2020) allowing for annual benchmarking of energy systems across the country and identification of opportunities for improvement, tracking pace and direction of energy transition is enabled. The hard-working movement to transform the energy system to deal with climate change has lost ground to the economic and social impacts caused by the current COVID-19 pandemic. In recent times, the COVID-19 pandemic has redefined the economic, political and social aspects associated with the energy transition and is unprecedented in its scale and speed. To cope with this global explosion, societies are forced to change and give up valuable goods and freedoms, and successfully achieving an energy transition requires an outcome that weathers the storm in energy markets. COVID-19 has caused severe disruption to the shutdown of nearly a third of global energy demand and uncertainty about the job prospects of millions of workers in the energy sector.

India faced to covid19 pandemic

Honourable Prime Minister Narendra Modi announced 'Janata Curfew' on Sunday, March 22, following which all industries and hotels and schools, colleges, markets, malls, all social functions and all business places were closed and social distancing was observed. Kept India from 24 March. He talked about isolating or isolating people coming from outside or from other countries and other states. With no reduction in the death rate, the lockdown was extended till May 3. A quarter (27.7 per cent) of the total working-age population (15-59 years) of 1003 million people or 285 million jobs were working for some days. After the lockdown it shows that 11.9 crore workers lost their jobs and employment within two weeks of the lockdown. Based on the 2011 census, India's households have an average of five family members who may face problems and around 227 million households in India are badly affected by COVID-19.

The CMIE survey shows that there has been a sharp decline in unemployment and unemployment has increased significantly in March 2020. The unemployment rate was 8.7%, a percentage that is 45 percent higher than the planned state unemployment rate of 6.1% for the years of 2017 and 2018. This is the highest unemployment rate since September 2016. The number of unemployed increased from 32 million to 38 million during a short period. In the last week of March, when we were upbeat about the time of lockdown, things got worse and the unemployment rate shot up to 23.8%. However, such protection reflects the impact on employment for the duration of the lockdown areas and cannot be seen as a complete loss of life. Many employees will return to work after the lockdown is over. Yet it is clear that many of them, migrants from other states and districts and workers engaged in itinerant or contract work in rural and urban areas in places of origin, and many who have moved to their communities, do not return home.

The five major affected sectors are manufacturing (28 million), retail, hotels and restaurants (32 million), construction (15 million), shipping, warehousing and communications (11 million) and banking, corporate and real estate (7 million) in urban areas . regions. Industry) This sector is

influenced by about 93 million informal workers. Of the 93 million unpaid workers in these sectors, 50% are self-employed, 20% are seasonal daily wage workers, and 30% are salaried and contract workers with no social safety net. Casual workers are considered the most disadvantaged in the construction industry due to the irregular nature of their work and the low average wages they earn. So, some frequent workers who are not currently in service, skilled workers and small shopkeepers sitting idle at home or returning home or staying in hostels will not be able to recover from the lockdown. The Federation of Indian Chambers of Commerce and Industry (FICCI) has attempted to assess the immediate impact of coronavirus on companies across the world by conducting joint sessions and surveys among industry leaders. According to the report, there has been a decline in economic activity across businesses, which affects all costs, including employer salaries, interest, loan repayment and taxation, apart from a direct impact on the production and distribution of products and services. The survey results revealed that 53 per cent of Indian companies reported a major impact on company operations in the initial period as a result of the coronavirus pandemic. Cash management in companies has been hit hard by the pandemic with almost 80% of recorded cash flow loss. The pandemic has had a major impact on supply chains, with over 60% of respondents saying their supply chains have been affected. Corporations are monitoring the situation carefully and expect the impact of the pandemic on the supply chain to increase further. Although the proposition of working from home presents barriers for some businesses, it has a profound effect on market movements. This is valid in industrial industries where workers are expected to be physically present at manufacturing sites and in service industries such as banking and information technology. But it is important for companies operating in these industries to be able to do research from home without sacrificing day-to-day work, which is not the case with workers in the informal sector.

COVID-19 Pandemic in Tamil Nadu

The first case of the COVID-19 pandemic was reported on 7 March 2020 in the Indian state of Tamil Nadu. The biggest single-day spike (30,987 cases) was recorded on 13 May 2021, with Tamil Nadu now in fourth place. Cases that have been confirmed. The cases in India are followed by Maharashtra, Kerala and Karnataka. The pan-national lockdown has affected industrialists' public sectors and transport sectors and farmers and flower growers in the state. The Tamil Nadu Federation of All Farmers Union said that about 15 lakh acres of summer paddy and 8 lakh acres of groundnut have been affected across the state due to lack of harvesters due to the lockdown. The sale and production of perishable products such as fruits and vegetables cannot be transported to the markets without transportation. The present study has been undertaken to find out the impact of COVID-19 on the various sectors of Tamil Nadu economy affected by considering secondary data. The study area is Tamil Nadu, the tenth largest state in South India. Its capital and largest city is Chennai and other districts. The total geographical area of the state is 1,30,058 sq km. It is the most urbanized and rural state in India, and one of the most industrialized states; The manufacturing sector accounts for one-third of the state's GDP. Tamil Nadu has 38 districts and more than 215 taluks. Tamil Nadu is reported to have the fourth highest number of confirmed cases, with 16,813

followers in Kerala, Karnataka and Maharashtra and other states in India. Therefore, the present study has been undertaken to know the impact of COVID-19 on various sectors of the economy of Tamil Nadu at the all-India level.

Coved19 pandemic and Electricity consumption in Tamil Nadu

In March 2019 and due to the COVID-19 lockdown, power and energy consumption declined by 9% across the country, while Tamil Nadu saw a decline of 14%. Tangedco feels that energy consumption can be reduced by more than 11,000 million units for the entire lockdown period after May 3. Tamil Nadu's average power consumption before the lockdown was announced was 10,000 million units per month. According to the data released by the Central Electricity Authority, the country's total electricity consumption was 1,08,355 million units in March 2019, but it came down to 98,404 million units in March this year. Similarly, Tamil Nadu's electricity consumption was 10,925 million units in March last year, compared to 9,349 million units in March this year. Tamil Nadu's total consumption in April last year was 10,500 million units. Considering the drop in consumption in the last week of March, when the lockdown was announced, if we extrapolate this to the entire lockdown period, the power consumption from March 25 to May 3 could be 11,000 million units. A senior Tangetco official said average monthly power consumption in Tamil Nadu is low. The first phase of the national lockdown began on 25 March. All industries and commercial establishments closed shops to prevent the spread of the pandemic. "Since we have a large number of industrial and commercial consumers, our consumption is high. As of January, this year, Tamil Nadu has 36.44 lakh commercial consumers and 7.47 lakh industrial consumers. Since the lockdown began, there has been no demand for electricity industries and commercial establishments," said a senior Tangetco official. Disco expects the demand to pick up in the coming days as the government has ordered the restarting of factories in rural areas. Demand is expected to pick up slightly next week as delta farmers prepare for the harvest season. But expect a major change only when factories and offices in and around Chennai start functioning. It can be possible. Evening and morning time. We put some thermal power units in standby mode when wind power generation increases. We generated 30 million units of wind power on Friday. Peak hour generation is 1,386 MW.

Impact of Covid-19 on various sectors of Tamil Nadu

Tamil Nadu is the second richest state in India by GDP and is the most industrialized state in India. Total State Value Added by Economic Activities the Indian economy is classified into three main sectors namely

- (i) primary sector or agriculture sector (which includes forestry and fisheries)
- (ii) secondary or industrial sector (includes mining and quarrying, production-registered and unregistered, gas, electricity, construction and water supply)
- (iii) Tertiary or service sector (includes all services sectors related to finance, real estate and professional services, public administration, security and other services, trade, hotels, transport, communication and broadcasting). In 2019-20, primary, secondary and tertiary

sectors contributed 12.89 per cent, 33.4 per cent and 53.67 per cent to the total GSVA, respectively. In comparison, the primary sector is neither more nor less. The agriculture sector was not affected to a great extent. The manufacturing sector (secondary sector) has been hit hard by the Covid-19 pandemic due to labor migration. For the tertiary sector, communication and other services have been increased in the pandemic situation which has influenced the increase in GSVA from 2019-20. Overall, the Gross State Value Added (GSVA) had a positive growth in the tertiary sector. In the secondary sector, the state is facing negative growth due to disruption in supply cycle, climatic factors, cultivation practices and Primary sector remains stable.

Growth Trends in area, production and productivity of major crops in Tamil Nadu

The COVID-19 pandemic has affected people in countries and states across the globe and India is no exception. Agricultural operations were also affected due to the COVID pandemic as the lockdown due to COVID-19 led to the timing of shifting of agricultural inputs including agricultural machinery from one place to another. India announced the lockdown with the start of harvesting of kharif crops in the agricultural season. There was a shortage of agricultural labor due to migration of people to their native places of agricultural labor during the lockdown. All villages and urban areas. And the production and productivity of seeds was assessed by the combined growth rates of cereals, pulses and commercial sectors such as millets, cotton and oilseeds and fruits and vegetables. In terms of area and productivity, the growth rate of food grains showed a positive trend at percentage level while total food grain production showed a negative trend. On comparing the data for the two years, the percentage change between 2018-19 and 2019-20 showed a growth rate of 5.6 per cent in area, 8.5 per cent in production and 2.7 per cent in productivity of commercial crops (cotton). And the agricultural products sector showed a positive trend and was significant in nature. While production and productivity showed a negative trend. Percentage change in production (55.3 per cent), area (27.8 per cent) and productivity (21.5 per cent) in 2019-20 over 2018-19 respectively. Volatility index for commercial crops (cotton) over a decade was higher for production while growth rate of oilseeds and food grains sector and production showed negative trend while productivity was positive trend and significant in nature. Percentage change (0.09 per cent) in area, production and productivity as compared to two years 2018-19 and 2019-20. (0.005 per cent), (0.14 per cent) respectively during the decade (2010-11 to 2019-2020) volatility index was higher for oilseeds in terms of production.

Conclusion

In India, industry, automobile, tourism, hospitality, retail market, transportation, commercial, social activism and industrial manufacturing and automotive sectors are the sectors most affected by the Covid-19 period. The impact on the energy and power sector is actively reduced. Industrial, and commercial spaces and demand were particularly affected during the lockdown period. Domestic demand has increased. The total power demand took a sudden hit (negative 26% per cent) in the first week of the lockdown. Unexpectedly the lockdown is likely to

continue on derivation. Medium and long-term demand growth will remain moderate until the economy recovers to pre-Covid-19 levels of activity. In March 2020, the Government of India issued a lockdown for the first time to deal with the rising number of COVID-19 cases; Energy consumption has declined dramatically in India. However, as soon as the lockdown was eased, energy consumption started recovering. This result suggests that energy consumption began to recover as soon as the lockdown was eased.

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