

# Economic Analysis on Covid-19 in Rural Economy

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## Abstract

### Introduction

The government of India under Prime Minister Narendra Modi ordered a nationwide lockdown to contain the spread of coronavirus outbreak in four phases as Phase 1: 25 March 2020-14 April 2020 (21 days), Phase 2: 15 April 2020-3 May 2020 (19 days), Phase 3: 4 May 2020-17 May 2020 (14 days), Phase 4: 18 May 2020-31 May 2020 (14 days) and ban the people from stepping out of their homes and all human economic activities for their breadwinning are paralyzing all over India. The government of Tamil Nadu followed the central government order. It implemented the same, which leads a great loss of economic activities of every individual, specifically in the rural agricultural economy.

### Objectives

- The general objective is to identify the Economic effect of Covid-19 in the study area, specifically.
- To examine the socio-economic status of the respondents in Musuvanoothu Panchayat.
- To find out the awareness, perception and adapted preventive measures apart from social distance in the study area and
- To identify the challenges and problems due to lockdown in the study area.

### Methods and Materials

It is a cross-sectional study with primary data collected from a panchayat. A panchayat named Musuvanoothu was selected from Nilakkottai Taluk, Dindigul District. The panchayat is consists of six hamlets with 1078 ration cardholders receiving their ration items from two ration shops one in head village Musuvanoothu and another one in Kallukottai. The respondents were selected from the head village ration shop accessing people alone and the interviewed number is 615 out of 670. The remaining persons are reluctant to answer the questions raised by the interviewer. A Purposive nonrandom sampling method was used in this paper with simple percentage analysis.

### Results and Discussion

Three fourth of the respondents are belong to the high potential age group of the labor force and doing farming activities, specifically floriculture and intercropping with vegetables. The yields obtain during the lockdown period leftover on the farm and losing earnings in front of their eyesight. Advances of money taken from the flower and vegetable merchants for farming activities cannot repay/settle by the farmers in the study area. Also, respondents borrowed money from money lenders for their lockdown food consumption expenses.

### Conclusion

Healthy innocent farming communities are suffering from stress and mental health issue due to lockdown. A good amount of economic loss incurred which can be mitigated or avoided if public cold storage is availed in the study area. Small and marginal farmer's agricultural loans & credit may be waived for their betterment in forthcoming days.

**Keywords:** Covid-19 lockdown, Rural economy, Farmers of floriculture

## Introduction

Everyone knows and accepts that health is wealth from the micro/ individual level to the macro level and healthy potential population as the human capital. The maintenance of health is individual responsibility at the micro-level and further to mitigate the spillover effect of health risk of him or her on third parties is a macro-level concept if the risk is infectious diseases. Even though physical and mental health is individual feeling and subject to their immune system, the opportunity cost is the highest in infectious diseases based on its speed of spreading on others. Many infectious diseases left their footprint and their vulnerability worldwide from primitive period to till date say from Small fox to today Covid-19. So, the individual to an economy / government started to invest in health as a preventive measure by vaccination. But, some of the infectious diseases are challenging humankind, like Covid-19. The spread of Coronavirus (COVID-19) has jolted the world economy suspending business activities and forcing millions of people to stay at home. According to estimates, the COVID-19 crisis would leave 25 million unemployed in Pakistan pushing millions towards hunger and poverty.

Many economists and eminent found from their research and written about Investment in man and its benefits in the long term which was accepted by all kind of economy and design their health care system according to their policy. The Supply of the health care system may be zero priced, national insurance-based, public-private partnership, or fully paid from pocket according to the system of economy. The routine supply of each country's health care system ran well with meeting the demand of their domestic morbidity. Smooth dynamic daily movements of humankind towards economic activities with their fast food lifestyle without thinking about a speed breaker. Yeah, globally, Humankind is very busy waving a hand to 2019 and welcoming 2020. The best part in the birth of English New Year, many of the numerologists, horoscope specialists made an elaborate conversation in print Media and mass media.

Further, some mass Medias telecasted a program by bringing various parts of eminent in astrology and made chat and analyze in a group about 2020. But

none ever expected a break in humankind's routine socio-economic activities would happen within few days and quarantine the people in their home. If sorrows, worries and depression come most of the humankind visit their loving God and trying to create a black economy by giving bribery to God, and spend more money in celebration of auspices days of God's birthday, wedding, etc., by ignoring God in pauper poor and their life lifting. This Covid-19 put a lock to God and Goddess of all religion with great equality.

The opportunity cost of healthy survival needs is social distances which in turn forced to have a global lockdown with a lot of awareness creating slogans all over the world. Epidemiologists are insisting that every country must take all necessary steps to control the spread of Covid-19 by maintaining social distance and enhancing the immune system of every individual of their country members, which indirectly needs or demands a survival and healthy nutrients intake with or without supplying workforce in case of formal workers and informal workers respectively. Meanwhile, many economists opined to find a way to reopen the economy and explicitly weigh the trade-off between virus-related health and broader human well-being that is in part a product of a functioning economy (Noah Feldman 2020). So, Today the world is engulfing with two crises, one is a health crisis and the other one is an economic crisis. Every people are worried about their daily social and economic routine halt due to Covid-19 and in some extreme cases attempting suicide and homicide (Thakur & Jain 2020)

Every human needs healthy life to reach their destination of happiness. Meanwhile, health is defined by the World Health Organization as a state of complete physical, mental, and social well-being, not merely the absence of disease or infirmity. According to this official definition, if any researcher checks with current infectious disease Covid-19, one can identify it is affecting the physical, mental, social, economic, and political aspects of individual to society and Society to an economy of a nation. So, Good health is an amalgamation of wellbeing and leads to the economic growth of the country. The spreading speed of Covid-19 differs from individual to individual based on their immune system, the same way its implications to the economy of every

country based on their existing health care system and its kind of economy and policies to control effects in a short period for avoiding more damages to the society.

More than 3.9 million cases of the novel coronavirus have been recorded worldwide, including at least 274,000 deaths, according to Johns Hopkins University. The United States is the hardest hit by the pandemic in terms of the number of fatalities which has now confirmed 1,283,829 coronavirus cases. The death toll in the country rose to 77,178. (Livemint.com). There are over 39 lakh cases worldwide. US, UK and Italy account for about one-third of active cases. More than 56,300 cases of coronavirus have been reported in India, with over 37,900 active cases. (The Print 9th May). According to the government official site of India Fights Corona COVID-19, there are 39834 active cases in India, 17846 were cured and discharged, 1981 deaths statistic of 9th May 2 pm. In the case of Tamil Nadu, there are 4364 active cases, 1605 cured/ discharged, and 40 deaths as of 9th May 2 pm.

Suppose a unit or a member in a family infected with Covid-19 means it will spread to others in the family, as well as with high negative spillover effect on third parties whoever cross the individual in her/his positive stage with Covid-19. Make the people be ideal by separation or make a social distance from others and losing from their labor force supply, which in turn leads to making an increasing trend in dependency ratio for daily routine survival needs at least three weeks. It will give a result or put a scar or hole in their socio-economic status. If saving is surplus in their previous history of economic activities, no issue, but in case of informal workers who mint money for their daily survival needs alone leads a paralyzes status to the individual family, and the society and in turn to the economy. This is what is occurring globally in more than 170 countries. Hence, here is an attempt made by the researcher to assess the effect of Covid-19 lockdown specifically in rural Tamil Nadu by studying one village panchayat.

Elisha OA (2020), Mario Arturo Ruiz Estrada et al. (2020), Sotiris Folinias and Theodore Metaxas (2020), Wyper et al. (2020), Elliana Olivia and Imanuel Gracia (2020), Jiang Du, et al. (2020), Dana Khadr Sabir et al. (2020), Oyeniran, et al.

(2020), Mohammad Reza Farzanegan et al. (2020), Sanjeeva Nishantha Perera et al. (2020), Warwick McKibbin and Roshen Fernando (2020), Peterson Ozili and Thankom Arun (2020) did a descriptive and empirical examination about the implications of Covid-19 in different aspects from different parts of the globe and still inflowing of articles for adding the researcher's information.

Hence from the existing studies, which are inflow into research publications, and depicts in multidimensional aspects start from national economic growth expected to decline, impact on the financial market, tourism, Strength of population, immune power of children, psychological factors of health care suppliers, a trend of Covid-19 and its scientific aspects in national and internationally. Because of social distance maintenance and movement restriction, primary data studies are limited and none about attempted to study any rural peasants. This work may be given a picture of a village panchayat for policymakers to know about what is going in the rural economy during the lockdown period.

### **Objectives**

The general objective is to identify the economic implication of Covid-19 in the study area, specifically.

- To examine the socio-economic status of the respondents in Musuvanoothu Panchayat.
- To find out the awareness, perception and adapted preventive measures apart from social distance in the study area and
- To identify the challenges and problems due to lockdown in the study area.

### **Methods and Materials**

This research fact is analyzed with a cross-sectional study based on the Purposive nonrandom sampling method. Data collection did with a Public Distribution Vendor at the point of ration shop in Musuvanoothu Panchayat of Nilakkotai Taluk, Dindigul District. This panchayat has six hamlets named Andipatti, Chekkapatti (130 ration card holders), Kallukottai (230 ration card holders), K. Piruvu (40 ration card holders), Milakaipatti, and Muthukamanpatti, Andipatti, Milakaipatti and Muthukanmanpatti (360 ration card holders

from three hamlets) receive their ration items in Musuvanoothu (310 ration cardholders in the head village) ration shop, while the remaining three receiving their ration items from the Kallukottai ration shop. The tool used for data collection was an interview scheduled with a 15 questions depicted in the four tables as a start from A,B, C to P subject to cover the objectives and observation method. The waiting /queuing time of every person was used by the interviewer in a casual way of talking to collect the information required for this study and attempted to cover the entire population of ration cardholders of Musuvanoothu ration shop users alone not all cardholders of village Panchayat. Because there are two ration shops for delivering the items in case of Musuvanoothu Panchayat, one in head village Musuvanoothu itself and another one in Kallukottai which is a hamlet under Musuvanoothu Panchayat. The researcher collected the information from the head village ration shop alone from 615 respondents out of 670 ration card holders in ration accessing point with the supporting help of a trained interviewer hailing from the village. The remaining cardholders are hesitant to speak or answer the questions at the vendor point. The total village activities observed. A descriptive design with percentage analysis attempted to justify the objectives chosen for the research fact of the study.

### Results and Discussions

This research paper intended to check the implications of Covid-19 in the rural economy as the major objective, for the same it is necessary to understand the socio-economic status, which will be meaningful to go in-depth understanding about the study area and the nature of implications of Covid-19 rural economy of Musuvanoothu Panchayat.

Table 1 depicts that there are 393 males and 222 females. In total, 615 ration card holders were interviewed at the point of ration supply in a causal way of talking to get the ground reality with local villagers initiation of conversation about the intended title when they queued for their ration supply. The village panchayat has many potential laborers for a sustainable contribution of the labor force in the current and another decade. The age group of 21 to 40 respondents exists as 70 in high

percentages which are contributing their labor force in their land agricultural activities also with working as a hired labor to neighboring for their needs. The educational level is growing in recent years from secondary to higher secondary to graduate because of Women Government College availability within a 5-kilometer distance. An Elementary school of Kallar Reclamation supplies the education from head village Musuvanoothu which covers its hamlet's needs at the tender age of children moving for education. So, educational status and literacy rate is good as 100 percent. Occupational status is highly farmers with fragmented land because of a division of families. 85.3 percentages of families have four and below four members in a family cared for by a breadwinner. 14.7 /15 percentage of families are feeding five and above five members by a single breadwinner.

**Table 1: Socio-Economic Status of the Respondents**

Gender	No. of Respondents		%
Male	393		63.9
Female	222		36.1
Total	615		100
Age	No. of Respondents		%
	Male	Female	
21-30	112	21	21.6
31-40	178	120	48.5
41-50	71	55	20.5
Above 50	32	26	9.4
Total	393	222	100
Education	No. of Respondents		%
	Male	Female	
Above Hr. Secondary	4	6	1.6
Higher secondary	192	32	36.3
Below Hr. Secondary	198	184	62.1
Total	393	222	100
Occupation	No. of Respondents		%
	Male	Female	
Peasants / Farmers	285	178	75.3
Agricultural Labour	88	42	21.1
Petty Business	20	2	3.6
Total	393	222	100

Dependency Ratio	No. of Respondents	%
4 and below 4 Persons in a family depends a bread winner	524	85.3
5 and above 5 persons in a family depends a bread winner	91	14.7
Total	615	100

Source: Primary Data collection

The table 2 reveals the awareness existing; knowledge's about the Covid-19, perceptions about the Covid-19 and the preventive measures taken to tackle the infectious diseases in the study area Musuvanoothu Panchayat. All the respondents knew that Covid-19 is a pandemic infectious disease. The Major respondents 84.1 percentage of respondents knew about Covid-19 by government frequent advertisement in Mobile phones, TV, followed by the knowledge shared from friends and relatives 13.8 percentage lastly but not least by health workers. All are well aware of the sources of Covid-19 spreading and integrated steps were taken to prevent it in their panchayat. The first-day of spraying, Neem leaves ground with turmeric added with water and poured in every street of their head village and its hamlets named Aundipatti, Muthukamanpatti, Milakkaipatti, Kallukotti, Chekkapatti, and K.Pirivu. The following days of the lockdown period restricted their movements and not taking or welcoming their kith and kin migrants in Tirupur, Coimbatore and Chennai. The village panchayat met three natural deaths, which were cremated and rituals finished with minimum gathering with social distance during the lockdown period. In general, the villagers highly followed the lockdown restriction and supported the government decision in controlling the pandemic of Covid-19 which reflected nil positive cases to date (May 11th of 2020). Cent percentage of respondents used traditional healing methods as a preventive measure in regular food intake for enhancing their immune system in the form of beverages. Three-fourths of the respondents (79.8%) washed their hands and used their cloth as masks during their mobility for necessary activities in lockdown periods.

Table 2: Awareness about Covid-19

Knowing about infectious diseases exist	No of Respondents		%
	Male	Female	
Yes	393	222	100
No	-	-	-
Total	393	222	100
Sources	No of Respondents		%
	Male	Female	
Government & Private Advertisement in T.V, Mobile Phone	319	198	84.1
Health workers, NGO	10	3	2.1
Friends and Relatives	64	21	13.8
Total	393	222	100
Knowledge of Sources of spreading	No of Respondents		%
	Male	Female	
Physical Contacts: Touching the infected, standing near, hugging	393	222	100
Spreading by Air: spitting the saliva and sputum, speaking with saliva spraying	393	222	100
Materials Contacts: wooden Items, Refrigerators, e-gadgets, Vegetables and Fruits, etc	393	222	100
Total	393	222	100
Preventive Measures	No of Respondents		%
	Male	Female	
Hand Washing often with soap	298	193	79.8
Mouth and Nose closing with at least Cloth/ Towel/ mask	267	168	70.7
Intake of Nilavembu, Sukara Kudineer, Lemon with Ginger & SukkuMalli Coffee / Subha Kara neer / Steaming the face, throat & head with Uglptus leaves / Nochi Leaves	393	222	100

Spraying Turmeric water mix with Neem surrounding the home street and total village	393	222	100
Restricting the persons movements in and out	393	222	100
Total	393	222	100
Lockdown/protection of society from pandemic	No of Respondents		%
	Male	Female	
Highly Agreed	373	207	94.3
Not Agreed	4	3	1.1
Neutral	16	12	4.6
Total	393	222	100

Source: Primary data Collection

Table 3 explains the Challenges and problems faced by the rural respondents during the lockdown due to Covid-19. The macroeconomic concepts classify the determinants which influence the economic development of a country as economic and non-economic factors. The economic factors are capital formation, natural resources, a marketable surplus of agriculture, the status of international trade and their system of the economy (maybe capitalist, socialist and democratic). The non-economic factors are their human resources, research and technology, education, health, transport, communication, political freedom, level of parallel economy, participation of social organization and lastly but not least the desire to move in the development of a nation by its citizen.

Here, if anyone looking into micro-level or an individual level Capital formation is his/her responsible for their productive activity which may be from their savings of the previous history of economic activities, the other source is government aid. It is crystal clear that capital formation from their savings is nil. Still, Money advances taken from their neighborhood commission mandi in Nilakkotai by taking as it is there responsible for moving to the next stage of their economic development which is practical in the study area. But the pity pauper poor labor who owns small fragmented land with scarce water resource availability followed the words of Prof Lewis even though they are not aware of his wonderful words about the natural resource availability. According to Professor Lewis, "A country which is considered poor in resources

may be considered very rich in resources some later time, not merely because unknown resources are discovered, but equally, because new methods are discovered for the known resources." Here the respondents used the intercropping method by cultivating flowers and vegetables for daily earning to monthly earing and used the existing resource optimally with sustainability in natural resource and its utilization by natural method.

The marketable surplus and selling activities are nil from last week March to May 15th, more than 50 days which leads to the highest unexpected pain and vain in their daily routine economic life. Their muscle power used for cultivation gone in vain when it comes to giving the yield, and not able to pay the advances taken from their merchants during their cultivation activities like sapling, weeding, fertilizers, pesticides, etc.,.

The non-economic factors like education, awareness, precautions about their health, communication to present their views calmly, minimum road and transport availability to access the necessary with high desire to contribute workforce for their standard of living exist excellently. The amazing features of the villagers are their integration and unanimous perceptions, which are reflected in many of their answers.

463 farmers are suffering presently by losing their income from their eyesight due to Covid-19 lockdown. Merchants who use to purchase in Nilakkottai flower market and export via air by a flight which carries flowers from Madurai Airport to Singapore is not availed because of continuity of fourth lockdown period. The state and central government norms and steps for farmers are in general. Still, the regional demand of farmers differs from another region because of differences in natural resources and their climatic conditions for the cultivation of crops. Some regions of India are dominated by food crops; some regions are dominated by cash crops. In simple words, healthy farmers wealthiest gone due to Covid -19 lockdown, who are suffering not by Covid-19 but by stress and mental sickness who does not know other economic activities and wish to sustain in agricultural activity alone. Cent Percentage of respondents took advances of money from their merchants by promising to

deduct from their flowers yield and vegetable yield, coconut yield, and banana yield which does not happen during the lockdown periods. Apart from the advances, 73.3 percent of respondents borrowed money from moneylenders for their lockdown expenses because of ideal sitting during the lockdown period. No earning, no wage except the rupees thousand received from the government per

ration card holder and supply of ration items which is not sufficient for daily three-time food consumption during lockdown which leads the farmers to borrow. There is a cent percent mental sickness due to monetary loss from their agricultural returns not able to market and to miss their village goddess mela in May, which will be social gatherings and loss of daily income from floricultural activities.

**Table 3: Challenges and Problems of Lockdown due Covid-19**

Village wise respondents not able to market their Agricultural Products			
Agricultural Products gone as waste in soil / rotten / free to people	Villages	No of Respondents	%
Flowers: Jasmine, Kanagamparam, Sampanki, Arali, Rose and Sevanthi inter cropping / separately vegetables following	Musuvanoothu	120	25.9
	Milakaipatti	70	15.1
	Muthukamanpatti	70	15.1
	Andipatti	145	31.3
	Kallukottai	41	8.8
	Chekkapatti	15	3.4
	K. Pirivu	2	0.4
Vegetables: Brinjal, Ladies fingers, Green Chilly, Drumstick, Tomato, Green leaves	Musuvanoothu	120	25.9
	Milakaipatti	70	15.1
	Muthukamanpatti	70	15.1
	Andipatti	145	31.3
	Kallukottai	41	8.8
	Chekkapatti	15	3.4
	K. Pirivu	2	0.4
Fruits: Banana	Musuvanoothu	2 (included in 120)	-
Coconut	Musuvanoothu	4 (included in 120)	-
Total	7	463	100

Any debt or borrowing during Covid-19 Lockdown			
Borrowing for needs of livelihoods	No. of Respondents		%
	Male	Female	
Yes	258	196	73.3
No	135	26	26.7
Total	393	222	100
Previous savings if any liquid form exist for emergency needs			
Savings if any	No. of Respondents		%
	Male	Female	
Yes	---	---	---
No	393	222	100
Total	393	222	100

Money taken from Commission Mandi for needs of Agricultural expenses			
Advances taken from Commission Mandi for needs of agricultural Production	No of Respondents		%
	Male	Female	
Yes	393	222	100
No	---	---	---
Total	393	222	100
Desire to Shift from Agricultural activity due to loss and debt			
Desire to Shift from Agricultural activity	No of Respondents		%
	Male	Female	
Yes	---	---	---
No	393	222	100
Total	393	222	100

Problems/ Issues due to Lockdown	No of Respondents		%
	Male	Female	
Mental Issue (Stress of being idle, economic loss of marketable surplus)	393	222	100
Social Issue (Postponement of any social gatherings)	393	222	100
Economic Issue (loss of daily income, wage)	393	222	100
Total	393	222	670 Card Holders

Source: Primary data Collection

The table 4 presents the suggestion given by the respondents for reviving from the burden of not settle their advance money taken and further borrowed for food consumption during the lock down period. The agricultural credit of small and marginal farmers needs to be waived. A need for Public cold storage or warehouse for perishable goods like flowers, vegetables with nominal user charge in Nilakkottai will cater to the demand of farmers. Starting an agro-processing unit and flower extracting unit by a public-private partnership in Nilakkottai taluk will procure the yield from land to a production unit. Finally, which emphasizes the closing of liquor shop run by the government for the happiness of individual to society because happiness is one of the indexes in measuring the development of a nation.

Table 4: Suggestions by the respondents

Solutions to revive their economic conditions	No of Respondents		%
	Male	Female	
Agricultural loan/Credit waive	393	222	100
Public sector Cold Storage/ Warehouse requirement	393	222	100
Procuring the perishable agricultural Commodities by public private partnership owning agro processing unit	393	222	100

Closing Liquor Shop for family happiness	393	222	100
Total	393	222	100

Source: Primary data Collection

### Conclusion

The lockdown period is affected the innocent, healthy hard-working farmers life who cultivated the perishable cash crops and put it/left them in soil with pain and vain. Covid-19 is not affected physically in the study area. Still, the stress and mental sickness due to economic burden or the opportunity cost of lockdown is high in case farmers in the study area. The amount of 1000 rupees and ration items given by the government will not compensate for their opportunity cost of lockdown. Now is the right time to learn from the mistakes, and better late than never, the government may open a cold storage/ warehousing and an agro-processing unit in the study area. Also, agricultural loan /credit waive for small and marginal farmers who will be highly benefitted to face the forthcoming days happily and able to sustain in agricultural activities vigorously.

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