



Munich Personal RePEc Archive

COVID-19: Policy Interventions and Socio-economic Impact in Andhra Pradesh, India

Bahinipati, Chandra Sekhar and Sirohi, Rahul A and Biswal,
Dinamani and K, Gouthami and G, Suresh and Singh,
Monalisa

Indian Institute of Technology Tirupati

18 May 2020

Online at <https://mpra.ub.uni-muenchen.de/100501/>
MPRA Paper No. 100501, posted 27 May 2020 06:16 UTC

COVID-19: Policy Interventions and Socio-economic Impact in Andhra Pradesh, India

Chandra Sekhar Bahinipati¹, Rahul A. Sirohi¹, Dinamani Biswal², Gouthami K.², G. Suresh² and Monalisa Singh²

Abstract:

The COVID-19 pandemic has claimed several lives and has already adversely affected the livelihoods of millions of vulnerable households. This policy brief surveys the current status of the disease, its spread and its likely socio-economic effects in the context of Andhra Pradesh, India. Given the global scope of the shock, the policy brief emphasizes the need for innovative and bold policy measures, particularly from the states' perspective.

1. Overview

The Covid-19 pandemic has spread to over 200 countries infecting almost 4 million people and killed nearly 0.3 million worldwide. As the casualties rise and as underfunded health systems crack under pressure, the effects of the pandemic on economic growth and development are likely to be very grave. China, for instance, has already ground to a halt as have major economies in Europe and North America. The worst affected nations around the world are: United States of America, Italy, Spain, Russia, United Kingdom, France, Brazil, India, etc. As of May 15, 2020, around 82 thousand people got infected and the death toll is in between 2600 and 2700³. The Indian economy which was already facing an economic slowdown for different reasons⁴, is likely to feel the full blow of the pandemic in the coming months as well.

The current economic conjuncture poses very difficult trade-offs for policy makers and it raises challenges that are altogether novel⁵. Economic shocks of course are not uncommon and governments around the world have developed an arsenal of weapons to tackle them but what is different about the Covid-19 induced crisis today is its unprecedented scope and global scale. In a

¹ Assistant Professor, Department of Humanities and Social Sciences, Indian Institute of Technology Tirupati, Tirupati – 517506, India; Email: csbahinipati@iittp.ac.in; rahul.sirohi@iittp.ac.in

² Ph.D. Scholar, Department of Humanities and Social Sciences, Indian Institute of Technology Tirupati, Tirupati – 517506, India. Further, we have acknowledged the assistance received from Jagadeesh for developing Figure 8.

³ <https://economictimes.indiatimes.com/news/politics-and-nation/coronavirus-cases-in-india-live-news-latest-updates-may15/liveblog/75748805.cms>; accessed on May 15, 2020

⁴ Subramanian, A. and J. Felman, (2020), "India's great slowdown: what happened? What's the way out?" CID faculty working paper no. 370, Center for International Development, Harvard University.

⁵ Chandrasekhar, C.P. (2020). Knowns and Unknowns in the Covid-triggered Global Economic Crisis. India Forum, available at: <https://www.theindiaforum.in/article/knowns-and-unknowns-covid-triggered-global-economic-crisis> [viewed 1/5/2020]

world where everything from a cup of coffee to an Android phone is manufactured in carefully coordinated supply chains scattered over several different countries, a simultaneous and drastic shock of the kind that we are witnessing today, presents a drastic shock to global supply lines and thus raises completely new challenges to policy makers. Whereas previously the appearance of shortages in one region could be alleviated by imports from another, the complete freeze on business activities across the globe today, rule out such responses. Apart from its implications for supply, the massive job loss that is underway as a result of the lockdowns is likely to also spiral into a major compression of consumer demand. According to Centre for Monitoring Indian Economy (CMIE), around 27 million youngsters (those are in 20s), for instance, lost their job in the month of April 2020⁶. This combined free fall of demand and supply raises grave uncertainties for governments and it constrains traditional tools available to policy makers. Rising up to the challenges of the Covid-19 crisis requires new, out of the box and innovative policies and in this regard the state of Andhra Pradesh can play a leading role.

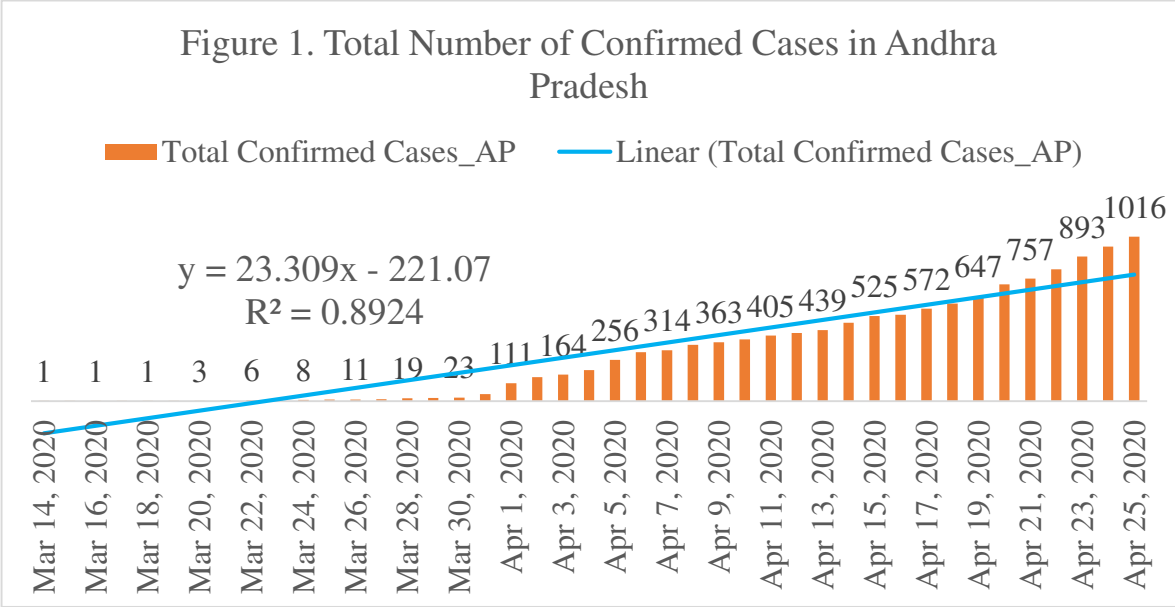
2. Covid-19 in Andhra Pradesh

2.1. Current Scenario

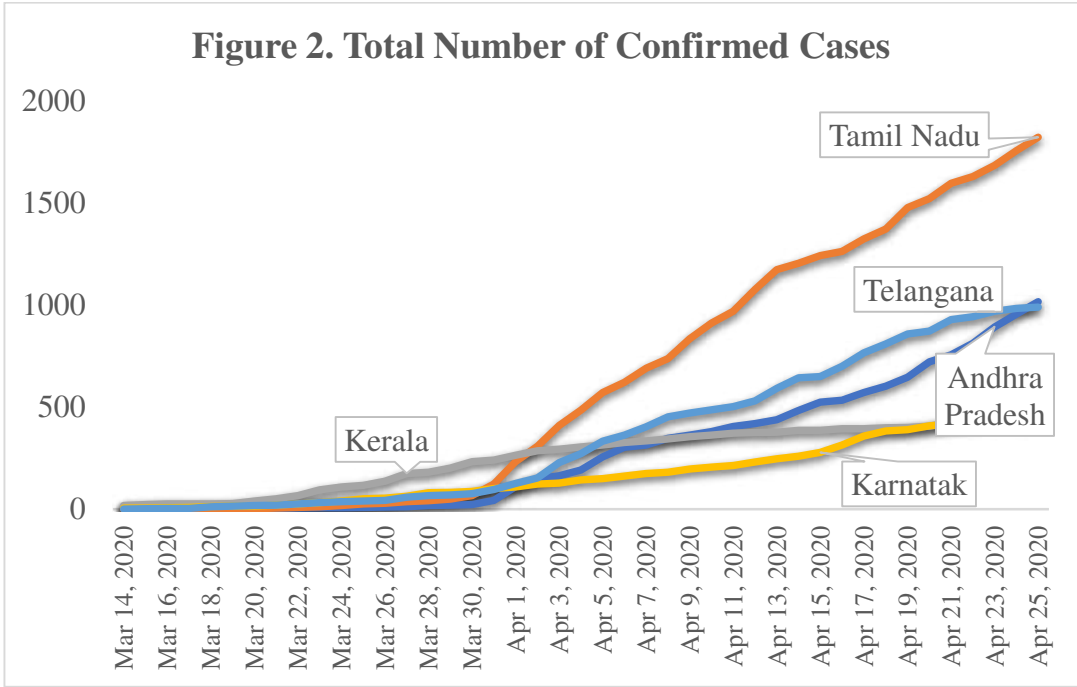
From a comparative perspective, the spread of the Covid-19 virus has been brought under control in the state. As figure 1 shows, the total number of cases increased steadily with since late March, with over 1000 cases being reached on April 25th, 2020. But a closer analysis of the doubling rate reveals that the rate of increase of cases has been declining steadily over the period. More precisely, beginning from late March till around till April 5th, the number of cases exhibited a doubling after every 4 days (there was a large jump between March 30th and April 3rd), but this doubling rate can be seen to have dropped sharply thereafter to a frequency of 10 days despite the spike between April 21st and 25th. While the numbers are still very far from the ones achieved by Kerala, they look much rosier than the worst hit states in India. Figure 2 shows the total number of cases for four other South Indian states. While Kerala and Karnataka are the standouts, Andhra Pradesh has indeed not fared too badly either. These numbers of course must be seen in the context of total number of tests conducted. It has been widely acknowledged that a key to fighting the spread of the virus is to test as widely as possible and on this front Andhra Pradesh remains far ahead of the pack as can be seen in figures 3 and 4. Its testing rate (per million) is four times that of Telangana and around double the rates in Karnataka and Kerala. Thus comparisons of the number of cases across these states must also take into consideration these high testing rates. These statistics however must be viewed with caution because whereas there has been a massive deployment of ICMR approved testing kits, according to some reports, in addition the state has also made use of TrueNat machines, generally reserved for testing tuberculosis⁷.

⁶ <https://www.firstpost.com/business/covid-19-lockdown-impact-27-mn-youth-in-their-20s-lost-their-jobs-in-april-reveals-cmie-8368431.html>; accessed on May 16, 2020

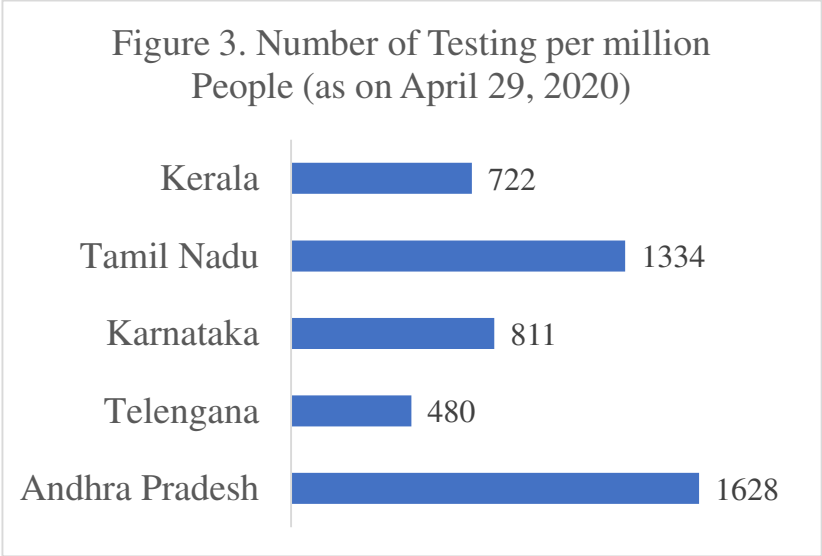
⁷ <https://www.deccanherald.com/national/how-andhra-pradesh-is-conducting-the-highest-number-of-covid-19-tests-per-million-population-829040.html> [viewed 1/5/2020]



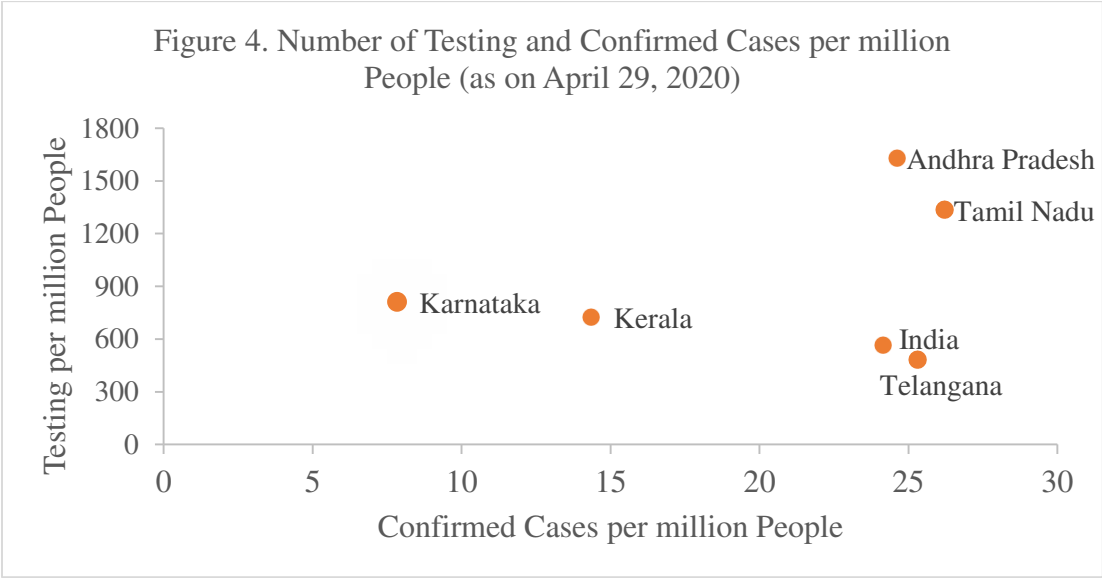
Source: Authors' figure (data collected from covid19india.org)



Source: Authors' figure (data collected from covid19india.org)



Source: Authors’ figure (data collected from covid19india.org)

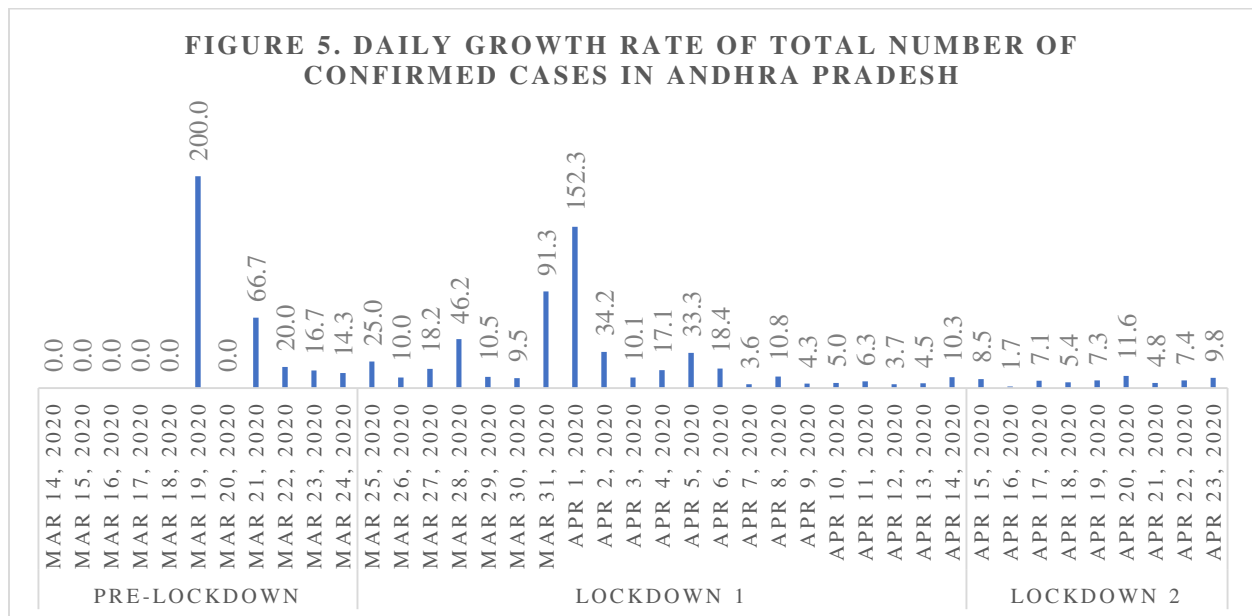


Source: Authors’ figure (data collected from covid19india.org)

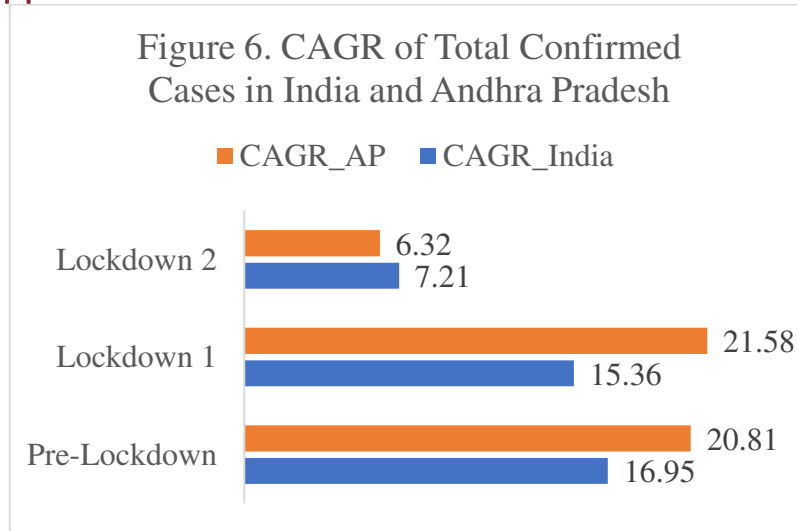
2.2. Effectiveness of various policy interventions

Both the national and state governments have reacted to the spreading of COVID 19 by trying to enforce social distancing. One of the major interventions in this regard was the lockdown which began on March 24. The first phase ended on April 14, 2020 and it was extended to May 3, 2020, thereafter. This has been further extended to a third phase. Figure 5 shows the daily growth rate of confirmed cases in the state during the lockdown period. A lower growth rate was observed during

lockdown-2. Similar findings also noticed when we estimate CAGR (see Figure 6). During pre-lockdown (March 14 to March 23), and lockdown-1 (March 24 to April 14) periods, the state has witnessed a higher CAGR in comparison to India. Moreover, a slightly lower CAGR was observed during the lockdown 2 period (April 15 to May 3). If one looks at district wise numbers (Figure 7), the CAGR in four districts -Kurnool, Krishna, Chittoor and Anantapur- has been very high when compared to state CAGR. These numbers of course have to be viewed with caution and careful statistical analysis will have to be undertaken to see if the lockdown has indeed had the desired effects. Figure 8 shows district-wise total number of confirmed cases on March 23, 2020, April 14, 2020 (ends lockdown-1) and May 4, 2020 (closes lockdown-2). Given the lockdown, the total number of Covid-19 cases has been increased in few districts like Krishna, Guntur, Kurnool, Nellore, Chittoor and Kadapa. It indicates that the government needs to take several other interventions apart from lockdown to control the spreading of Covid-19 cases across these districts. The insights from the Behavioural economics may help the policy makers to handle such pandemic situation in more effective way.

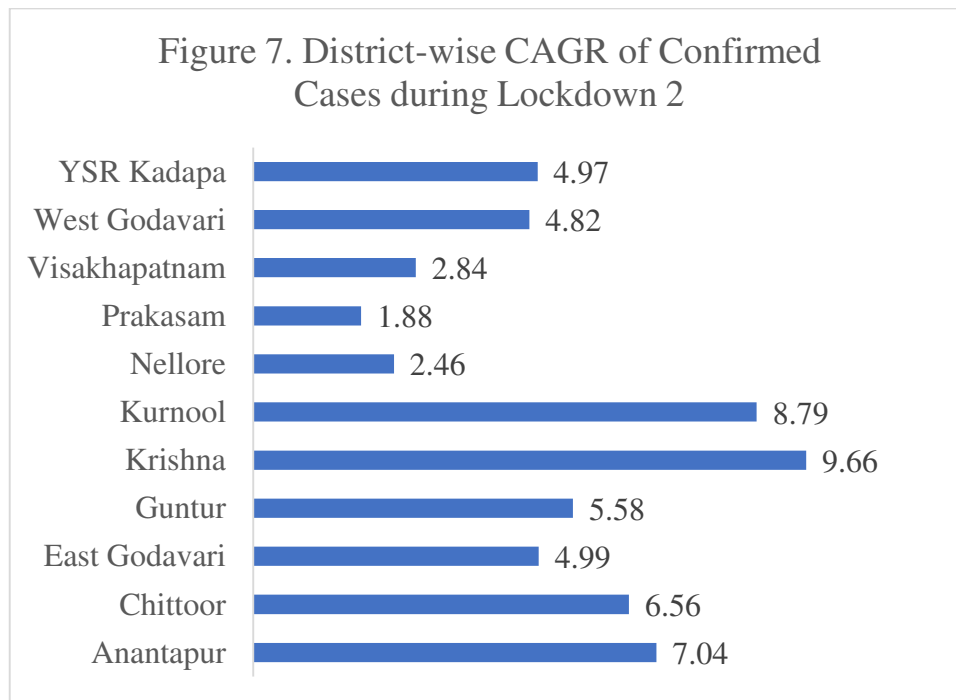


Source: Authors' figure (data collected from covid19india.org)



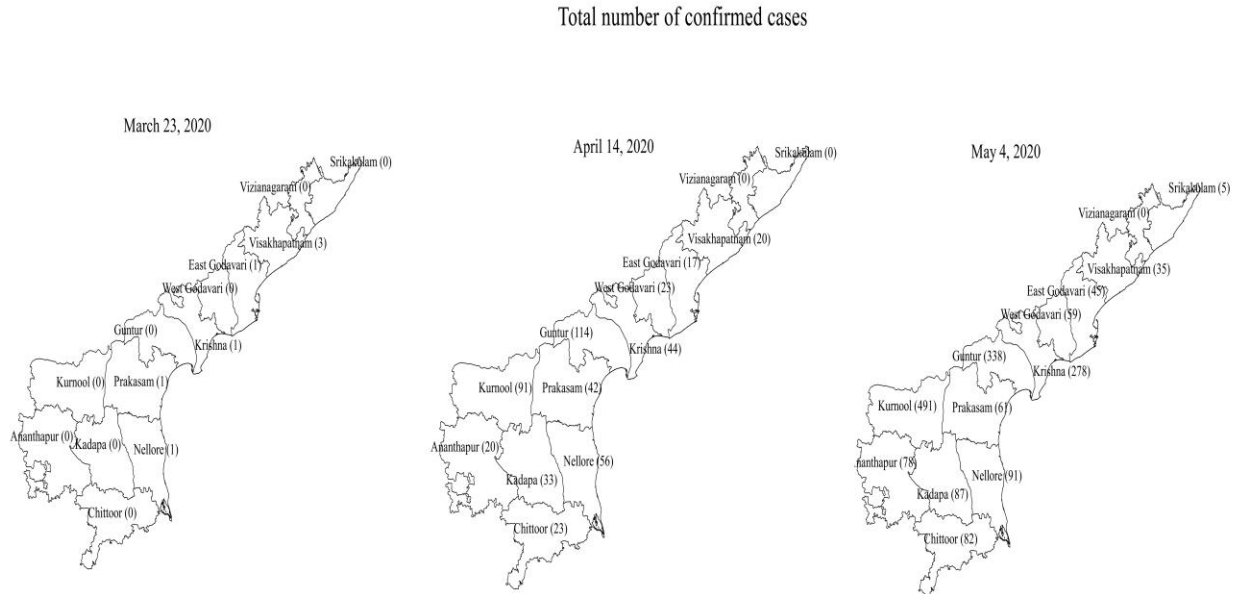
Source: Authors' figure (data collected from covid19india.org)

Note: CAGR- Compounded Annual Growth Rate; the data from lockdown 2



Source: Authors' figure (data collected from covid19india.org)

Figure 8. District-wise total number of confirmed cases in Andhra Pradesh



Source: Authors' figure (data collected from covid19india.org)

3. Socio-Economic Impact

The effects of the Covid-19 pandemic on the state have to be seen in the context of its occupational structure. India is home to one of the largest informal work force in the developing region. An estimated 90% of workers are engaged in the informal sector. In Andhra Pradesh, recent estimates suggest that only 7.4% of rural and 29.1% of urban workers are salaried workers. The share of contract workers is minute, at around 1.7% of total work force. Strikingly, well over half the rural work force and approximately a third of the urban work force is employed as casual labour⁸. Given this occupational structure, the effects of the virus induced lockdown are likely to wreck-havoc on the livelihoods of a majority of the work force that is dependent on informal employment. Self-employed workers running shops, grocery stores and other kinds of small businesses are also likely to be adversely affected by the lockdown. The supply crunch aside, demand depressing effects of are likely to be an important channel through which the state will be effected as millions of informal workers will be forced into joblessness until the lockdowns are lifted and until some

⁸ Data collected from Report on District Level Estimates for the State of Andhra Pradesh (2013-14,) available at: <https://labour.gov.in/sites/default/files/AP%20District%20Level%20Report.pdf> [Viewed 14/4/20]

semblance of normality returns. Such adverse effects are likely to spread and hit large sections of the population.

Another area of immediate concern is with regards to Andhra's agricultural sector. While the country has adequate food stocks to cover existing demand, the lockdown may have unpredictable effects on regional food supply and on farmer incomes. With the sudden shut down in government procurement, the wide spread closure of vegetable markets, freeze on surface transportation and acute labour shortages, supply chains connecting agricultural producers to consumers will likely be disrupted. Anecdotal evidence coming in from various parts of the country suggest that farmers have been forced to sell their produce at prices well below market price due to supply chain failures, but such a state of affairs may well turn out to be temporary. If supply bottlenecks persist there is a possibility that food inflation may follow and this would add further pressure on the already fragile conditions of rural and urban households. Further, while such price rise may transmit some benefits to agricultural producers, they would not benefit substantially as the margins will largely be captured by middlemen and traders⁹. It is worth emphasizing that the state government has already begun a drive to purchase paddy at MSP at the village level itself to help alleviate some of these issues¹⁰.

4. Time to Innovate

The lockdown imposed on the country has been justified in terms of the lethal nature of the Covid pandemic. Yet, in a state like Andhra Pradesh where a vast majority of the work force depends on informal sector, such a freeze is likely to have devastating effects on the livelihoods of millions of households. There is an immediate need to provide adequate and timely assistance to the most vulnerable sections of the work force so that they may tide over these unusual times. Such a stance would obviously require expansionary fiscal policies which have come to be frowned upon by policy makers in recent times. But given the grave nature of the current crisis there appears no alternative to emphasize on such policies which have already been embraced by a number of developed economies. Of course, an expansionary fiscal stance as a stand-alone package is likely to be of little use and it may even backfire given that the crisis today has a major supply-side dimension to it. Given the degradation of supply chains that a state like Andhra Pradesh is facing today, there is a need to back fiscal activism by expanding access to food and other essential products through the PDS and by expanding citizen's access to quality and timely health care as well. The state government can therefore play more pro-active role in ensuring that essential commodities are available in adequate quantities and at cheap prices. The dilapidated PDS system could be revamped and modernized to undertake such tasks. Further given the high density of population in India and terrible conditions of living that the vast majority of Indians have to face

⁹ See Ramakumar, Ram (2020). The Covid--19 Pandemic and Indian Agriculture: A Note. Foundation for Agrarian Studies, available at: <http://fas.org.in/blog/covid19-and-indian-agriculture/?fbclid=IwAR1AM2XOUobLroQWnFB97aLGydVGIgaOwocpsTJG9QTUMV5DAX6W021TYrA> [viewed 1/5/2020]

¹⁰ <https://www.thehindu.com/news/national/andhra-pradesh/in-a-first-ap-government-to-procure-paddy-at-the-doorstep-of-farmers/article31342512.ece> [viewed 1/5/2020]

on a daily basis, to slow the spread of such diseases the government must think in terms of universal housing schemes as well, as have been experimented with in other developing nations.