

# The Potential Impact of COVID-19 on the Asian Rural Economy: A Study Based on Asian Countries

Siddhartha Paul Tiwari<sup>1\*</sup>

<sup>1</sup>Google Asia Pacific Pte. Ltd.

## RESEARCH ARTICLE

### Abstract

In the aftermath of the recent outbreak of COVID-19, which has adversely affected rural economies across Asia, challenges of unprecedented proportions have now arisen as a result. Currently, it is pertinent to look in depth and critically at the impact of the pandemic on rural economies now. However, most previous studies ignore the above-mentioned research gap. This is especially critical to marginalized populations living on limited resources, small landowners, and migrant workers who earn low wages in an economy where fewer resources are available. There is also imperative to identify solutions that would enable member states to quickly reconstruct the rural economy sector in a sustainable way. Hence, to explore the effect of COVID-19 on the rural economies of the Asia region, we adopt a qualitative research approach. Based on this technique, our findings suggest that one of the solutions to increasing the resilience of the rural economy is the automation of the rural economy in a sustainable manner. Particularly, our findings indicate that the adoption of a sustainable and inclusive approach to automating the rural economy can enhance efficiency and speed at each stage of the supply chain. Moreover, our findings suggest that it is possible to take many measures to maximize the contribution of sustainable rural economy automation efforts. These can contribute to the recovery and resilience of the rural economy sector. Based on the above findings we provide theoretical and practical implications.

**Keywords:** rural economy and pandemic, the economic impact of the pandemic, post-pandemic technology landscape, rural society, pandemic

**DOI:** <http://doi.org/10.52631/jemds.v2i3.116>

## OPEN ACCESS CC BY-NC-SA 4.0

\*Corresponding author  
sidpaultiwari@gmail.com

Submitted 19 April 2022

Revised 2 July 2022

Accepted 29 June 2022

**Citation**  
Tiwari (2022). The Potential Impact of COVID-19 on the Asian Rural Economy: A Study Based on Asian Countries. *Journal of Education, Management and Development Studies*. 2(3). 1-7. doi: 10.52631/jemds.v2i3.116

## 1 INTRODUCTION

Policy responses to the current pandemic have been mixed as most governments in the affected countries have not been able to apply the same level of efficacy in dealing with shocks that affect rural economies (Huang et al., 2022). This has usually happened when multiple economic and social factors come into play. Additionally, Ranscombe (2020) points out the details of rural areas at risk during the COVID-19 pandemic in detail. Rural areas have generally experienced multiple economic and social shocks concurrently, which is understandable. The recovery initiatives of rural communities, therefore, face a serious challenge within the context of the recovery process due to the risk of divergence in socioeconomic progress, not only between vulnerable rural communities and the rest of the population within cities (Ward, 2022). Within a single country,

we can also observe this phenomenon between different regions. Clearly, a divergence of this magnitude will undermine the progress that has been made in Asia's rural sector in recent years.

In Asia, the pandemic outbreak of 2019 has negatively impacted many aspects of the rural economy, including food availability in some areas, disruptions in rural economy supply chains, a shortage of labor and other inputs in the rural economy, and a reduction in income of some rural areas (Khan et al., 2021). Against this backdrop, there have also been instances of positive government interventions that have proven time and contributed to the containment and amelioration of the adverse effects of urbanization that are closely related to the pandemic. It is possible to take many measures to maximize the contribution of sustainable rural economy automation efforts. These can contribute to the recovery and resilience of the rural economy sector. Among them are meeting the needs of wage earners on a day-to-day basis, improving rural infrastructure, fostering the use of automation technologies, encouraging research and development, and maximizing the potential of automation to create job opportunities.

A significant impact of the pandemic is being felt on Asia's rural economy sector which is unprecedented. As well as slowing progress, the pandemic could also reverse the progress achieved in the past few years. As a result, the global community will be motivated to ensure that nobody remains behind, as promised during the UN Millennium Summit. Thus, Amin (2006) presents an in-depth account of the 'Millenium Development Goals, focusing on their importance as well as detailing how each goal relates to others. According to a few recent studies, between 75 and 140 million people may be added to the global list of the undernourished in 2022 as a result of this pandemic. In Asia, 400 million people still go hungry due to malnutrition, making it one of the most undernourished regions in the world. Asians comprise the majority of those who suffer from malnutrition around the globe.

## **2 METHODOLOGY**

### **2.1 Research design**

A qualitative approach has been used in this study to explore how pandemics affect rural economies in Asia through the lens of a qualitative research study. The relationship between the variables in the survey was examined and analyzed as part of this article's qualitative research to provide deeper insight into the issues.

### **2.2 Participants**

As a result of focus group discussions and in-depth interviews with 107 professionals from 28 organizations involved in rural economies and technologies, the study largely arrived at its recommendations and conclusions. In addition, the respondents were selected based on their knowledge and experience with the topic of the current study. Respondents were asked to explain further the five factors, which are: decreasing trends in throughput, increased economic vulnerability in rural areas, a lack of human resources, education, and social protection, and problems with the supply chain.

### **2.3 Instrument**

We developed a questionnaire and discussed it with experts in the field. The experts made sure that the questionnaire was acceptable to the public and that it was understandable. A second expert was enlisted to check the participants' responses following the interview. Thus, they enable us to conclude the answers provided by participants.

### **2.4 Procedure**

The data for the study was collected through face-to-face interviews with representatives of the firm. To improve the overall response rate, and give respondents a chance to request clarifications,

this face-to-face interaction provided a chance to check the correctness of the respondents' responses to this research. As a result of face-to-face interviewing, you can ensure accurate responses, facilitate an accurate interpretation of survey tools, and increase the quality of the data collected. In turn, this enhances the validity of our findings.

## **2.5 Data Analysis**

We analyzed the data collected from the targeted respondents with the help of Microsoft Excel and Super Decision software. As the result of the qualitative analysis of the interviews, the author has found there to be five main factors, which influence rural economies in Asia when it comes to the impact of the pandemic. In the following section, we will examine the outcomes of the interview and related discussions.

## **3 RESULTS AND DISCUSSIONS**

### **3.1 Impact of Pandemic on Rural Economies in Asia**

As the pandemic began, normalcy was disrupted along with the onset of the outbreak. As a result of this outbreak, the rural sector was hit hard, and its functioning was heavily dependent on its ability to comply with the health department's regulations. Following are five aspects of the rural economy that has been the hardest hit as a result of the pandemic.

#### ***3.1.1 A Downward Trend in Throughput of the Pandemic***

Rural economies have experienced a slowdown in all product operations as a result of the pandemic. Several examples have been found where fertilizer deliveries have been delayed in rural areas, resulting in the breaking of cultivation cycles and a postponement of planting. Firms with high productivity became firms with low productivity as a result of the pandemic. The degree of social distance required for the conduct of daily activities presented an additional challenge.

#### ***3.1.2 Continued Economic Vulnerability in the Rural Areas***

Investing and recovering in rural areas may not proceed as quickly as they would in urban areas, due to the uncertainty of economic stability and the uncertainty of economic vulnerability that follows the end of the pandemic. Government spending and guarantees are required to prevent rural poverty from becoming a vicious cycle. Through income-based loans, such as investments in automation and internet technology, many rural areas have been successful in encouraging consumer spending and business investment. Additionally, it provides the state with the opportunity to reorient its rural investment strategies in a more sustainable direction through automation and sustainable rural development.

#### ***3.1.3 Insufficient Human Resources***

With a growing number of restrictions on the transfer of people and the travel of goods, rural areas have been experiencing a labor shortage. Therefore, many skilled and unskilled workers could not access rural areas that needed labor. There have also been a few workers who have decided not to work as they are concerned about contracting an infection. Thus, there were insufficient workers to perform all the functions necessary to support the rural economy. The reduction of international travel has also negatively impacted the economies of many countries in Asia that are heavily dependent on overseas foreign workers to support their economies.

### **3.2 Education and Social Protection**

The pandemic affected rural areas, especially women, old people, children, and the disabled. On evoking an inclusive education approach, Dube (2020) gives detailed insights on the use of online learning in rural contexts in the context of COVID 19. Many older persons in several ASEAN countries expressed concern about losing their income. Furthermore, women and girls are disproportionately affected by the disruption of education caused by school closures. In rural areas, the cost of living has increased. Malnutrition and a lack of education pose a threat to

children in this region. Several hundred thousand daily wage earners in the region are unable to access social safety nets, including health services, and many are left in economic and social hardship due to border closures and lockdowns.

Additionally, Henning-Smith (2020) describes the unique impact of COVID-19 on older adults living in rural areas and highlights that rural elders have more underlying health conditions than urban elders as well as fewer resources available to them. The state of health care in rural areas is severely lacking, as is access to technology and online connectivity. There is an acute shortage of healthcare and education services in rural areas of ASEAN due to the pandemic. People in these countries have little formal education, possess mundane skills, and are more likely to work on a daily wage in the informal sector.

### 3.2.1 Supply Chain Issue

As a result of the breakdown of supply chains, goods and people are being moved rapidly around the world. The impact of this trend is putting pressure on local, regional, and even global supply chains, while it is also threatening the resilience of rural food systems. This pandemic resulted in the disruption of the supply chain and impacted the availability of essential items that are necessary to run the rural economy, such as fertilizer and machinery. The outbreak also pushed back the time when rural economy equipment was repaired and maintained. As a consequence of the pandemic, the underlying risks, fragilities, and inequities that exist in our food systems have also been accentuated.

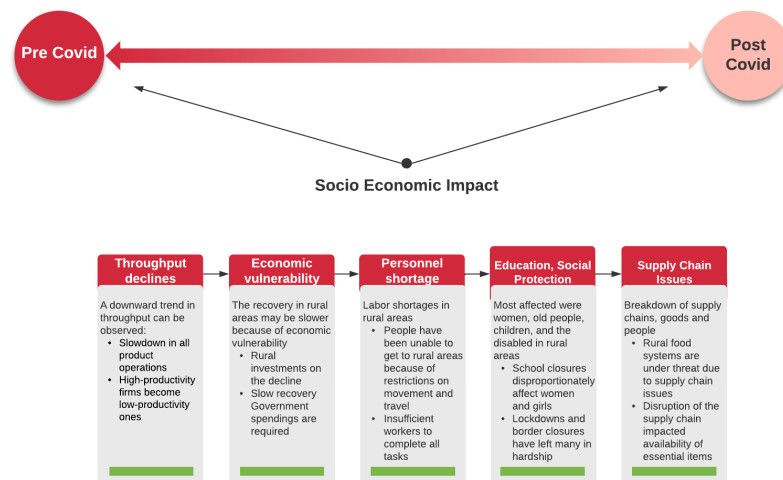


Figure 1. Summarizing the impact of a pandemic on rural economies of the Asia region.

## 3.3 Pandemic-related Technology and Automation

Automation technologies have proved useful in pandemic preparedness and response, but they can also be useful in building resilience against future shocks. Moving the automatization agenda forward will be critical to creating more robust and resilient societies and achieving sustainable development goals. However, the consequences of the automation divide have been highlighted as billions of people in the region with limited access to automation technologies have been cut off from vital assistance, services and information when they needed them most. For example, when remote learning was adopted during the first wave of the pandemic, it did not serve all countries and population groups uniformly. The unaffordability of Internet service and lack of automation skills are critical barriers to opportunity and resilience.

To alleviate rural crises, technological advances led to the introduction of digitalization, which facilitated the navigation of rural residents. Throughout the post-covid era, the technological

influence created during the pandemic will continue to have a significant impact on the rural sector. Diverse adaptations have been made, improving rural society's resilience and marketability. The adoption of technology in rural areas has contributed to greater access to information and data during the period of the pandemic due to the adoption of technology. A lot of the technical aspects introduced during the pandemic continue to be used by many rural communities due to their effectiveness and framework. During the time of the pandemic, there was very little physical interaction between people, and this made it difficult for villagers to access reliable information regarding their products and hindered their ability to make informed decisions. With the advent of technology, the informational gaps between villages diminished as physical interactions were replaced with online interactions—thus, this led to a greater sharing of ideas between villages and a more actively organized discussion of how to deal with the pandemic. Due to its uncanny ability to connect multiple rural sectors, digital technology continues to be used even in the post-covid world. Having information on the rural markets, securing online markets, and properly analyzing cultivation details and weather data enables the development of technological adaptations that are necessary for the rural economy and the rural markets.

### **3.4 Managerial Implications**

While exploring the effect of a pandemic on rural economies of the Asia region current study provides several theoretical and practical and managerial implications. First, theoretically, our study provides new insight into how pandemics affect rural economies of the Asia region. We suggest that scholars should pay more attention to this phenomenon. In addition, to the theoretical implications, this research provides some beneficial implications. As Covid-19 has produced direct high costs on economic activities, particularly in rural economies of Asia regions. Our study demonstrates that countries such as Asia must address their challenges and make suitable environments for economic recovery. Policymakers should focus on long-term goals that promote economic forward by supporting long-term sustainable growth and poverty reduction. Our findings also reveal that policymakers must boost economic activity and spending in job creation in regions where poor and lowly skilled workforce can participate and get advantages. In determining sustainability, policy selections, and investment choices should be arranged strategically. Furthermore, based on findings, we suggest that it may be possible to reduce the burden of taxes, lessen the need to import inputs from outside the rural economy and improve productivity. Importantly, the abovementioned factors will enhance rapid recovery following pandemics, as well as make rural society and rural economic sectors, in general, more resilient to the consequences of future pandemics.

## **4 RECOMMENDATIONS**

As a result of the findings of this study, it is recommended that further research should be conducted on some avenues after this study has been completed, while other avenues may remain for further study. The findings of this study should be interpreted and expanded cautiously. This study recommends that caution should be exercised when generalizing its results to contexts outside of one's institution since this study's results are context-dependent. Even though there is theoretical evidence that the pandemic profoundly affects rural economies in the Asia-Pacific region, the scope of the study can be expanded by using statistical data gathered from a large sample size or by selecting any other region. Considering the author's recommendation, you should be aware that there is some reservation in the study regarding whether it is generalizable to other settings. According to the recommendation made here, one should clarify the value of the speculation by learning what has already been done in other economies and, in addition, how different countries' economies differ from one another should be carefully examined.

## **5 CONCLUSION**

Automation in the response to pandemics is useful not only as a means of preparing for and responding to outbreaks but as a tool for building resilience in the event of future outbreaks.

Taking the automation agenda forward in rural economies is essential if we are to create more robust and resilient societies, Coombs (2020) focuses on whether COVID-19 is the tipping point toward intelligent automation of work. The consequences of this age of automation and the web divide have become apparent, however, as the millions of people in the region lacking access to modern automation and the internet have been deprived of timely access to essential services and timely information when they most needed it. In the first wave of the pandemic, the widespread adoption of remote learning was one of the ravages of the pandemic, but it was not available to all rural populations uniformly. The rural areas experience the well-known problem of a lack of access to internet service and a shortage of skills in the field of automation that has become a serious impediment to the growth of opportunities.

## REFERENCES

- Agnoletti, M., Manganelli, S., & Piras, F. (2020). Covid-19 and rural landscape: The case of Italy. *Landscape and urban planning*, 204, 103955.
- Altieri, M. A., & Nicholls, C. I. (2020). Agroecology and the emergence of a post COVID-19 agriculture. *Agriculture and Human Values*, 37(3), 525–526.
- Amin, S. (2006). The millennium development goals: A critique from the south. *Monthly Review*, 57(10), 1.
- Callaghan, T., Lueck, J. A., Trujillo, K. L., & Ferdinand, A. O. (2021). Rural and urban differences in COVID-19 prevention behaviors. *The Journal of Rural Health*, 37(2), 287–295.
- Chen, X., & Chen, H. (2020). Differences in preventive behaviors of COVID-19 between urban and rural residents: lessons learned from a cross-sectional study in China. *International journal of environmental research and public health*, 17(12), 4437.
- Coombs, C. (2020). Will COVID-19 be the tipping point for the intelligent automation of work? A review of the debate and implications for research. *International journal of information management*, 55, 102182.
- Cuadros, D. F., Branscum, A. J., Mukandavire, Z., Miller, F. D., & MacKinnon, N. (2021). Dynamics of the COVID-19 epidemic in urban and rural areas in the United States. *Annals of epidemiology*, 59, 16–20.
- Davies, A. (2021). COVID-19 and ICT-supported remote working: Opportunities for rural economies. *World*, 2(1), 139–152.
- Dearinger, A. T. (2020). *COVID-19 reveals emerging opportunities for rural public health*. American Public Health Association.
- De Luca, C., Tondelli, S., & Åberg, H. E. (2020). The Covid-19 pandemic effects in rural areas. *TeMA-Journal of Land Use, Mobility and Environment*, 119–132.
- Dube, B. (2020). Rural online learning in the context of COVID 19 in South Africa: Evoking an inclusive education approach. *REMIE: Multidisciplinary Journal of Educational Research*, 10(2), 135–157.
- Henning-Smith, C. (2020). The unique impact of COVID-19 on older adults in rural areas. *Journal of aging & social policy*, 32(4-5), 396–402.
- Henning-Smith, C., Tuttle, M., & Kozhimannil, K. B. (2020). Unequal distribution of COVID-19 risk among rural residents by race and ethnicity. *The Journal of Rural Health*.
- Hirko, K. A., Kerver, J. M., Ford, S., Szafranski, C., Beckett, J., Kitchen, C., & Wendling, A. L. (2020). Telehealth in response to the COVID-19 pandemic: Implications for rural health disparities. *Journal of the American Medical Informatics Association*, 27(11), 1816–1818.
- Huang, K., Cheng, B., Chen, M., & Sheng, Y. (2022, September). Assessing impact of the COVID-19 pandemic on China's TFP growth: Evidence from region-level data in 2020. *Economic Analysis and Policy*, 75, 362–377. Retrieved 2022-07-25, from <https://linkinghub.elsevier.com/retrieve/pii/S0313592622000832> doi: 10.1016/j.eap.2022.05.016

- Khan, S. A. R., Razzaq, A., Yu, Z., Shah, A., Sharif, A., & Janjua, L. (2022). Disruption in food supply chain and undernourishment challenges: An empirical study in the context of Asian countries. *Socio-Economic Planning Sciences*, 82, 101033.
- Ki-Moon, B. (2013). The millennium development goals report 2013. *United Nations Pubns*, 365, 366.
- Mueller, J. T., McConnell, K., Burow, P. B., Pofahl, K., Merdjanoff, A. A., & Farrell, J. (2021). Impacts of the COVID-19 pandemic on rural America. *Proceedings of the National Academy of Sciences*, 118(1), 2019378118.
- Murthy, B. P., Sterrett, N., Weller, D., Zell, E., Reynolds, L., Toblin, R. L., ... & Harris, L. Q. . (2021). Disparities in COVID-19 vaccination coverage between urban and rural counties—United States. *Morbidity and Mortality Weekly Report*(20), 759.
- Ogunkola, I. O., Adebisi, Y. A., Imo, U. F., Odey, G. O., Esu, E., & Lucero-Prisno III, D. E. (2020). Rural communities in Africa should not be forgotten in responses to COVID-19. *The International Journal of Health Planning and Management*, 35(6), 1302–1305.
- Ohta, R., Matsuzaki, Y., & Itamochi, S. (2021). Overcoming the challenge of COVID-19: A grounded theory approach to rural nurses' experiences. *Journal of general and family medicine*, 22(3), 134–140.
- Ohta, R., Ryu, Y., & Sano, C. (2021). Fears related to COVID-19 among rural older people in Japan. In *Healthcare* (Vol. 9, p. 524). MDPI.
- Ranscombe, P. (2020). Rural areas at risk during COVID-19 pandemic. *The Lancet Infectious Diseases*, 20(5), 545.
- Sachs, J. D., & McArthur, J. W. (2005). The millennium project: a plan for meeting the millennium development goals. *The Lancet*, 365(9456), 347–353.
- Souch, J. M., & Cossman, J. S. (2020). A commentary on rural-urban disparities in COVID-19 testing rates per 100,000 and risk factors. *The Journal of Rural Health*.
- Sun, Y., & Monnat, S. M. (2021, September). Rural-urban and within-rural differences in COVID-19 vaccination rates. *The Journal of Rural Health*, jrj.12625. Retrieved 2022-07-25, from <https://onlinelibrary.wiley.com/doi/10.1111/jrh.12625> doi: doi: 10.1111/jrh.12625
- Tiwari, S. P. (2022). Information and communication technology initiatives for knowledge sharing in agriculture. *arXiv preprint arXiv:2202.08649*.
- United States. Congress. Senate. Committee on Appropriations. Subcommittee on Agriculture, Rural Development, & Related Agencies (1984). . (n.d.). Agriculture, Rural Development, and Related Agencies Appropriations for Fiscal Year 1985. *Department of Agriculture*, 98(994).
- Van der Ploeg, J. D., Renting, H., Brunori, G., Knickel, K., Mannion, J., Marsden, T., ... Ventura, F. (2017). Rural development: from practices and policies towards theory. In *The Rural* (pp. 201–218). Routledge.
- Ward, K. (2022). *Assessing Disaster Management Effects on Recovery Outcomes in Rural Post-Disaster Japan* (PhD Thesis). Michigan State University.
- Wiggins, S., & Proctor, S. (2001). How special are rural areas? The economic implications of location for rural development. *Development policy review*, 19(4), 427–436.
- Zenic, N., Taiar, R., Gilic, B., Blazevic, M., Maric, D., Pojskic, H., & Sekulic, D. (2020). Levels and changes of physical activity in adolescents during the COVID-19 pandemic: contextualizing urban vs. rural living environment. *Applied Sciences*, 10(11), 3997.