

E-Commerce Blast may mitigate the Adverse Impact of COVID-19 Crisis on Rural Agri-product Trade in Developing Regions

Overview

- The COVID-19 pandemic proved to be one of the most catastrophic health crises in history, inflicting alarming human health concerns across the world
- Food and agricultural production became challenging as a result of pandemic-related lockdowns and market shutdowns which are expected to last for years
- There have been numerous changes in the demand and dynamics of labour supply in all sectors. The pandemic related restrictions in the first four months of 2020 is predicted to be responsible for a 1.4% drop in farm labour supply and a 3.11% drop in production for the whole of Southeast Asia

Role of Ecommerce

Since the start of the COVID-19 epidemic, smallholder farmers have been able to continue receiving assistance, obtaining critical funding, receiving farm inputs, and locating new markets for their crops, all thanks to digital agriculture tools such as E-commerce. Customers were able to purchase agricultural products straight from the farm thanks such tools

Methodology

- Obtained 105 papers via Google Scholar, ScienceDirect, and Web of Science which cover the COVID - 19 period from 2019 to 2021
- Selected 57 documents for further analysis based both qualitative and quantitative criteria
- Influence of COVID - 19 on agri product trade and coping mechanisms, through the usage of E-commerce, in a total of 15 developing nations

Response to food security during the COVID 19 pandemic

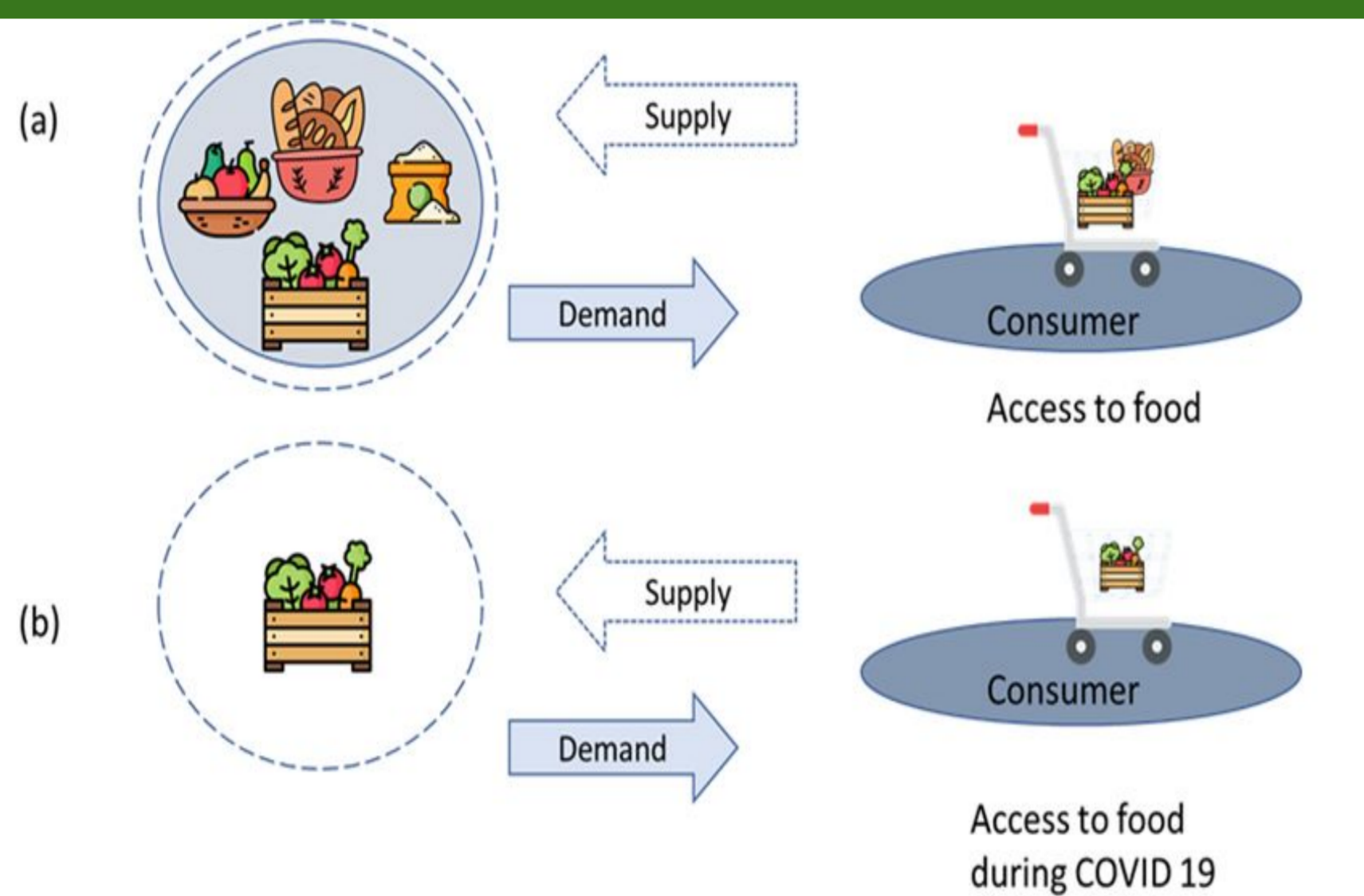
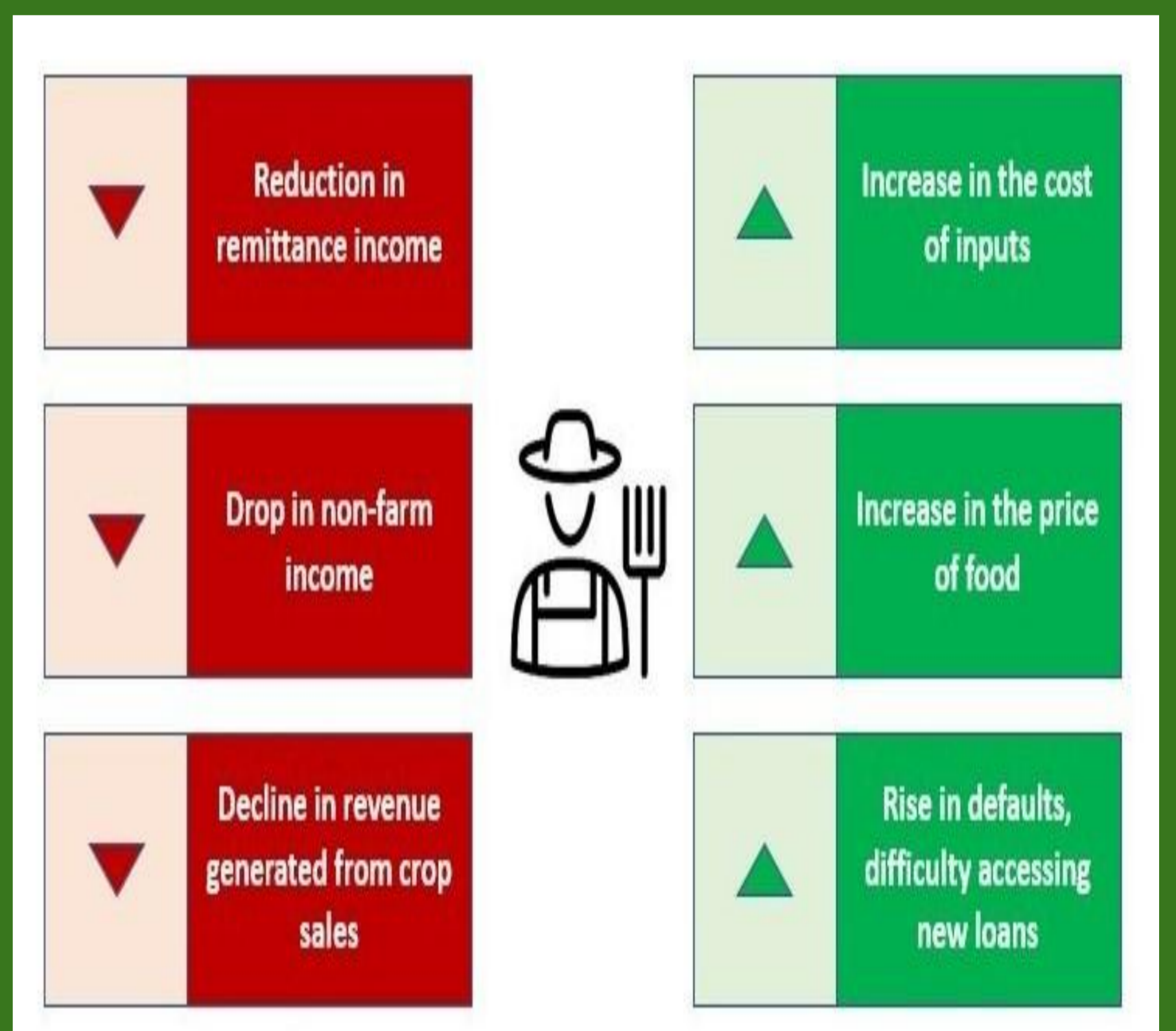


Figure 1 (a) Prior to the pandemic, the food security structure demonstrated that farmers produced sufficient supply for daily use so that the consumers could readily get it through demand-driven purchasing patterns. (b) The food security structure following the pandemic demonstrates that, as a result of government restrictions enacted in response to the outbreak, the market currently faces a food supply shortage from farmers for daily use. Unemployment and food scarcity constrain not only the supply of food but also its demand, eroding consumers' purchasing power. (Adapted from: Food Frontiers. 2021;2: 396-406; icon credit: www.flaticon.com)

Key Findings

- Agri E-commerce has the potential to make farmers more resilient towards the adverse effects of COVID-19.
- It can have a favorable influence on the socio-economic well-being of workers in the agricultural sector, consumers, and beyond.
- COVID-19 teaches us that if we maintain E-commerce sustainably by eliminating all gaps, not only farmers but also consumers would lead an easy healthy living style.

Trend in income and expenditures of smallholder farmers during the COVID - 19 pandemic period



Farmer Responses

- The farmer responses show that the usage of E-commerce platforms may be a successful alternative to reduce the gaps in the value chains and the involvement of third parties in rural communities.
- Farmers in many countries have begun to perceive E-commerce as a platform to exchange goods and services.

Cambodia	• Virtual extension services using telecommunications-based services to assist farmers amid the social distancing regulation (Gregorio & Ancog, 2020)
Vietnam	• Vietnam Digital Agriculture Association (VIDA) was launched to upgrade the technology infrastructure, develop digital farming, connect with, and expand markets, identify tailored digital solutions for each cultivation model, attract investors, and have human training (Gregorio & Ancog, 2020)
Malaysia	• Thirty percent increase in orders since the beginning of their Movement Control Order (Gregorio & Ancog, 2020)
India	• "2 Digital Technology Programme" introduced where 200,000 farmers and traders have already registered to use the app to help make supply chains function better and more efficiently (Kumar et al., 2020)
Iran	• Online platforms to sell agricultural products and handicrafts during the pandemic (Alavion and Taghidi, 2020)
Rwanda	• The Food and Agriculture Organization of the United Nations (FAO) and Rwanda Development Board (RDB) have unveiled Rwanda's first-ever National Strategy on E-commerce in Agriculture Value Chains (Kropff, et al 2021)

Table: Farmer responses to E-commerce with the emerging COVID-19 pandemic

Consumer Responses

- The progress of the IT section has brought about dramatic alterations in consumer behavior and accelerated online marketing.
- However, most people in developing countries preferred to buy agricultural products from the real-time market prior to COVID-19. But now, due to the COVID-19 restriction buyers substituted their behaviors quickly from bricks to clicks.

India	• Customers are satisfied with the E-commerce framework by saving time and getting fresh and healthier products (Reddy & Kumar, 2021)
China	• Consumers prefer to buy organic foods from online platforms, even if they are willing to pay high prices to get the fresher product to boost their immunity against COVID-19 (Gao et al., 2021)
Indonesia	• During the pandemic security, ease, and promotion maintained by online agribusiness and food companies accelerate the responses of the customers (Iskandar 2021)
Taiwan	• The number of online buyers increased by 4.9% after the COVID-19 breakout (Chang & Guo, 2021)

Table: The substituted behavior of the consumers due to the COVID-19 restriction

Welfare Effects

- The COVID-19 outbreak is having deleterious impacts on farmers' revenues. According to the World Bank, in several LMICs, more than 75% of the households depending on farm income expect their income to drop by 2020.
- Additionally, many younger family members returned to their rural communities during the pandemic's peak and assisted their family members in learning how to use the platform.

Indonesia	Janihub, an Indonesian Agri e-commerce player, saw an increase in sales in April by 90% (compared to February) and they also improved their applications by making them simple to use for farmers. (Mustafa, 2020)
India	Agricultural e-commerce such as Snapdeal helped farmers to eliminate intermediaries, which resulted in increased income to the farmers by reducing wastage. They can deliver fresh commodities to the customers during the COVID 19 pandemic. (Vern & Sindhu, 2021)
China	Pinduoduo, a China's Agri e-commerce, recorded more than one billion orders of farm items from rural merchants, an increase of 184 percent year over year. (Hai-ying GU, 2020) The average price of green leafy vegetables per kilogram sold through e-commerce is 4 CNY higher than the field sales price in China. Through the interviews, sale channels such as Freshippo and Vegetable Steward directly reach consumers, and there are no middlemen channels, so the price is higher. (Hai-ying GU, 2020)
Pakistan	In March, April and May, GrocerApp, an Agri e-commerce app in Pakistan, reported increases in demand of 50 to 70 per cent per month. As the pandemic raged on, growth slowed to a still robust 20 to 30 per cent per month in the final months of 2020. (Arathoon, 2021)
Kenya	Between March and May 2020, the number of users on Mkulima Young's platform increased fourfold. Mkulima Young is an online marketplace for agricultural inputs, equipment, and crops in Kenya. (Arathoon, 2021)
Uganda	With the help of the SafeBoda ride-sharing app, 800 vendors find new customers for their produce, 18,000 drivers supplement their income to mitigate income losses from COVID-19, and 50,000 customers can have fresh produce delivered safely to their homes. (Arathoon, 2021)
Nigeria	FarmCrowdy, a crowdfunding platform for farmers, enables to collect produce from its network of more than 25,000 rural farmers, and store and sell produce in Lagos - where consumer demand is high during COVID - 19 epidemics. (Mustafa, 2020)
Colombia	Waruwa, an Agri E-commerce app completely overhauled its' business model from B2B to B2C, largely targeting consumers staying at home. Waruwa Colombia supported their network of smallerholder farmers and single-handedly distributed fifteen tonnes of produce daily. (Mustafa, 2020)

Table: Comparison of evidence showing farmers' income increase through various Agri E-commerce apps during the pandemic in different countries



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