Has Global Agricultural Trade Been Resilient under Coronavirus (COVID-19)? Findings from an Econometric Assessment

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Global agricultural trade has been described as being "resilient" to the coronavirus pandemic. However, the nature and size of this resiliency across countries and products is not clear. Using a reduced-form, theoretically consistent gravity-based model of monthly bilateral trade, we estimate the effects of COVID-19 on global agricultural trade using incidence rates, policy restrictions imposed by governments, and de facto reductions in human mobility. We find that while agricultural trade remained stable, the sector as a whole did not go unscathed. First, COVID-19 reduced agricultural trade by 5 to 10 percent, a quantified impact two to three times smaller than in the nonagricultural sector. Reductions in human mobility and policy restrictive responses were the most evident drivers of trade losses. Second, we find sharp differences across commodities, with nonfood items (hides and skins, ethanol, cotton, etc.), meat and seafood, and higher valued agri-food products most severely impacted by the pandemic. The COVID-19 trade effect for major bulk commodity sectors was found to be insignificant, or in some cases, positive. Third, examining the effect across countries, we find mixed evidence that low-income countries' trade flows were more sensitive to the pandemic. Fourth, we find evidence that trade flows adjusted to these disruptions over time, consistent with an "adaptation effect." Finally, the pandemic also impacted the extensive margin of trade with more severe disruptions detected in air shipments. Findings from this study provide new insights into the dimensions of global agricultural supply chains most resilient and most vulnerable to disruptions.