Demand Shocks and Supply Chain Flexibility

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This paper analyzes supply chain flexibility with uncertainty in consumer demand. As the circumstances regarding COVID-19 showed, large shocks to food demand can create problems exacerbated by the inflexibility of the food supply chain. This model provides a framework for food waste caused by large shocks to food demand. While flexibility in the supply chain may help stabilize the food supply, the effect on firm profits is ambiguous. Policies that consider increasing the flexibility of the supply chain and/or mitigating the impacts of changes in food demand are examined.