

May 2023 Newsletter

Hello Colleagues and Friends,

Welcome to our monthly newsletter! This month's features are:

- The Market Corner article Demand Shocks Feature in Recent Food Price Inflation by C-FARE Board Member, Michael Adjemian
- New Direction features articles and papers titled:
 - [The Economics of Aquatic Plants: The Case of Algae and Duckweed](#)
 - [Carbon mitigation payments can reduce the riskiness of bioenergy crop production](#)
 - [Genetically engineered varieties and applied pesticide toxicity in U.S. maize and soybeans: Heterogeneous and evolving impacts](#)

Keep reading to learn more,

C-FARE

Market Corner

Demand Shocks Feature in Recent Food Price Inflation

Since 2022, year-over-year food prices have increased at their fastest pace in over four decades. And, as shown in the figure, food prices are rising at a faster rate than prices for other goods and services in the economy. Market observers have offered a range of explanations for this inflation in the price of food, from transportation bottlenecks and supply chain challenges due to the Covid-19 pandemic, to rising concentration among processors and retailers, to commodity and fertilizer production fallout from Russia's invasion of Ukraine, and to demand shocks in part driven by historically-large U.S. government stimulus. Studying price changes at the food-group level offers some insight; rather than being confined to a subset of items affected by idiosyncratic supply disruptions, like cereals and wheat products hit by the war in Ukraine, or the egg supply harmed by avian influenza, recent food price inflation is widespread through the U.S. food basket.

Even though the results are of clear policy and practical significance, academic work on measuring the drivers of food prices empirically is relatively thin, yet bursts of articles tend to appear after notable food price increases. In two different papers, several co-authors and I investigate how the supply and demand sides of the market contribute to recently-observed inflation in food prices. Using both traditional time series methods[1], and a newly-introduced decomposition technique[2], my findings indicate that demand-side shocks explain a larger share of food price inflation than they have in decades—particularly for food service. These results support the notion that persistent inflation is likely demand-oriented, and that to a substantial degree policies that support the demand for food on the part of consumers are responsible for recent food price rises.

Michael Adjemian, C-FARE Board Member and Professor at the University of Georgia

ICYMI

- Join us at the next C-FARE webinar, **Underwater, in the Field, and in Our Homes: Crops, Climate and Consumers**, on Thursday, June 1 at 12 p.m. EST. Registration is available [here](#).
 - C-FARE's Webinar on "**Food Security in the U.S. and Worldwide: What the Data Tell Us About Hunger and Policy**" is now available on our [website](#) and through this [recording](#).
 - Check out our fourth episode of C-FARE's podcast [Get a Grip with FARE](#) featuring Peyton Ferrier and Steve Neff from the USDA Economists Group.
-

New Directions

- **The Economics of Aquatic Plants: The Case of Algae and Duckweed.** This review examines global microalgae, seaweeds, and duckweed (MSD) production status and trends. It focuses on cultivation, recognizing the sector's existing and potential contributions and benefits, highlighting a variety of constraints and barriers over the sector's sustainable development. It also discusses lessons learned and ways forward to unlock the sector's full potential. [Learn more here](#).
- **Carbon mitigation payments can reduce the riskiness of bioenergy crop production.** Perennial bioenergy crops provide substantial carbon mitigation benefits but have risky returns. This study couples economic analysis with a biogeochemical model (DayCent) to examine the effect of carbon mitigation payments on the spatially varying bioenergy crop returns and risk profiles relative to conventional crops across the rainfed United States. [Learn more here](#).
- **Genetically engineered varieties and applied pesticide toxicity in U.S. maize and soybeans: Heterogeneous and evolving impacts.** The extensive adoption of genetically engineered (GE) varieties in U.S. agriculture has dramatically changed the patterns of pesticide use. How this process ultimately affects environmental risk remains an open question. Previous studies have typically relied on aggregate trends to infer the impact of GE crop adoption on pesticide use, which fails to address selection bias and unobserved heterogeneity. [Read more here](#).