

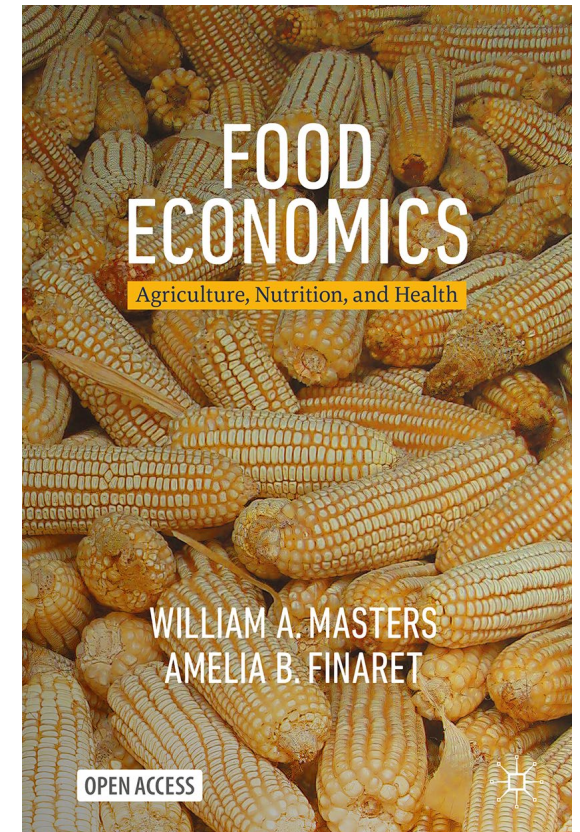
# The new economics of food: agriculture, nutrition, and health

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<https://sites.tufts.edu/foodeconomics>



# What is the new economics of food?

Recent findings about a big, rapidly changing sector of society:

We trace how **agriculture** relates to input supply and food businesses

A huge and consequential sector, with a distinctive structure and large role for policy

- the world's poorest remain farmers, trapped by need to meet subsistence needs on low productivity farms
- when incomes grow, non-farm food businesses grow and change rapidly

...then add **nutrition and health**, with new data about both deficiencies and excesses

Many nutrients and bioactive attributes of food cannot be seen, tasted or smelled

- people want healthier food, but usually do not know what is actually needed for health
- marketing of premium products creates the impression that healthier products are more expensive

...leading to **surprising insights**, because much of the food system is hidden from view

For example:

- family farming remains dominant for most crops, largely due to information asymmetry about labor effort
- people in most places specialize in a few foods, but want diverse diets leading to a big role for imports

# What is the new *Food Economics*?

## Principles of economics (Chapters 1-6)

### 1. Introduction

Motivating food economics

### 2. Individual Choices

Consumption and production theory

### 3. Societal Outcomes

Supply, demand, trade, elasticity

### 4. Social Welfare

Economic surplus, externalities

### 5. Market Power

Imperfect competition, game theory

### 6. Collective Action

Public goods, non-market goals

## Data about the food system (Chapters 7-12)

### 7. Poverty and Risk

Inequality, safety nets, vulnerability

### 8. Food and Health

Behavioral economics, interventions

### 9. Food in the Macroeconomy

Recessions, unemployment, inflation

### 10. International Development

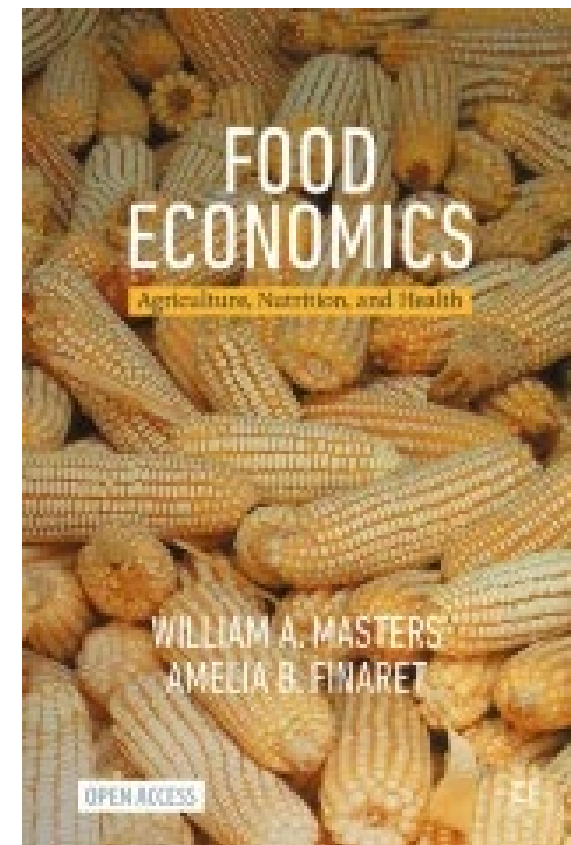
Ag. transformation, diet transition, urbanization

### 11. From Local to Global

International trade, globalization, value chains

### 12. The Future of Food

Agribusiness and agroecology, food environments

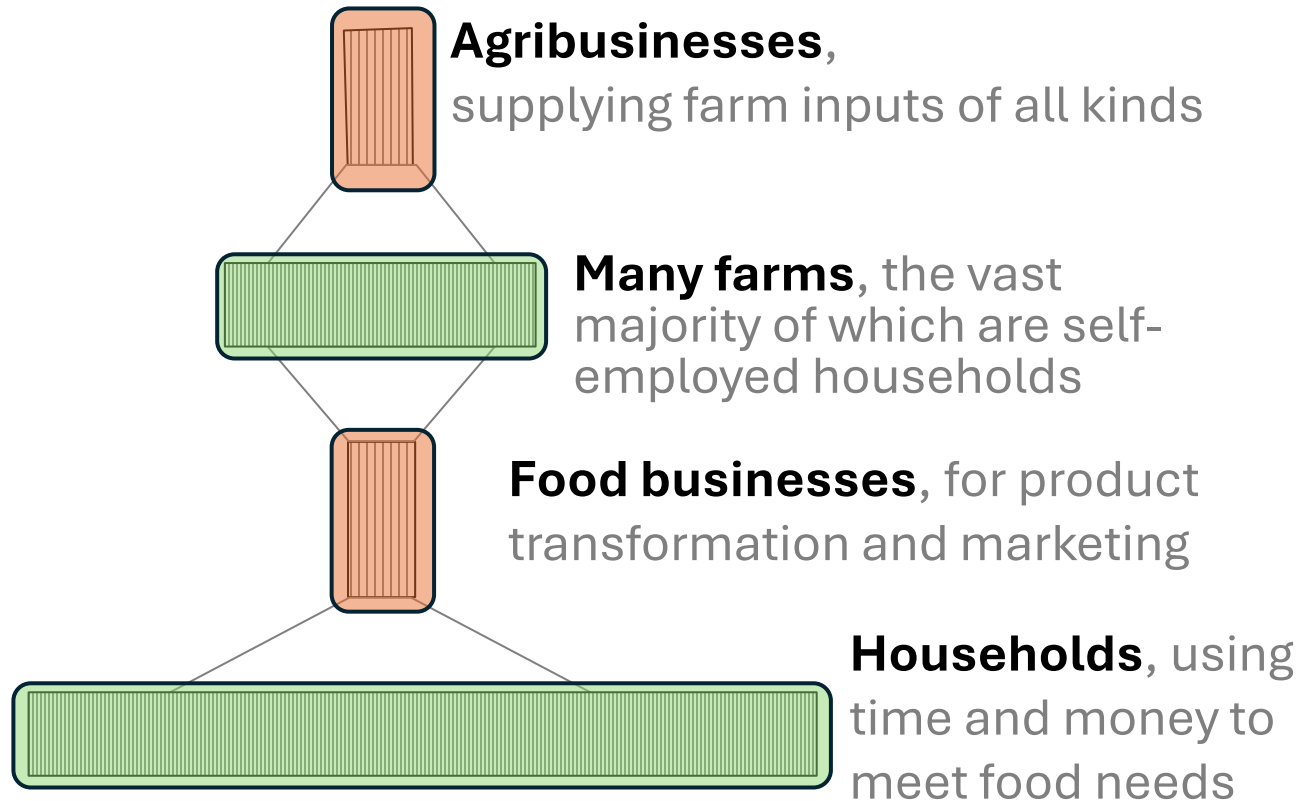


<https://bit.ly/FoodEconBook>

# The book covers all aspects of the food system

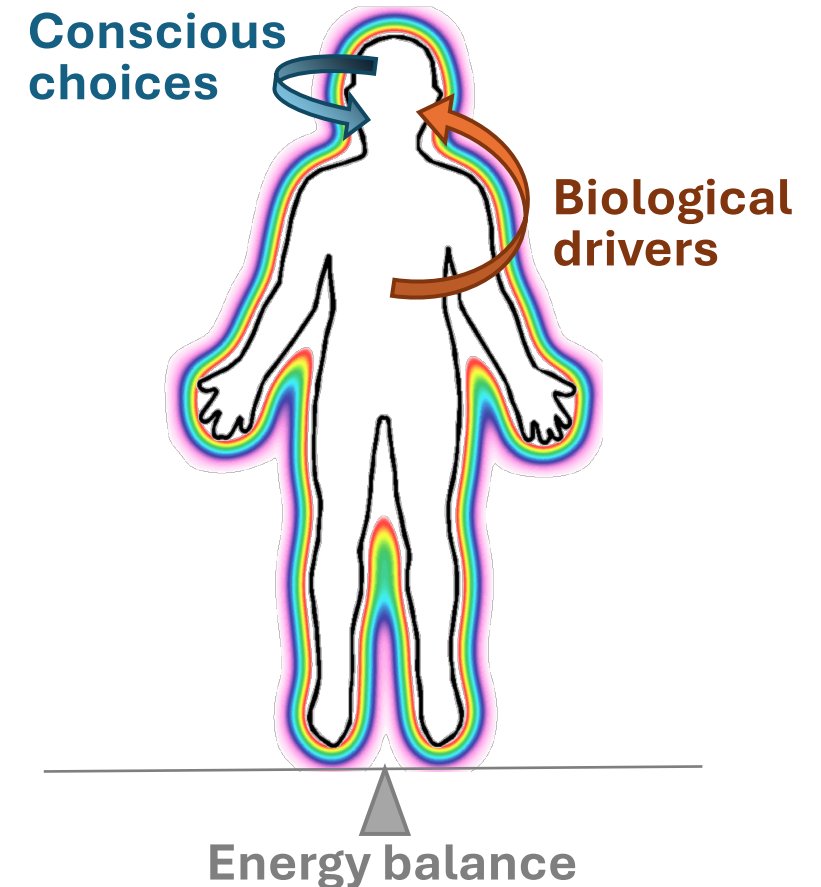
## An unusual industrial structure

Figure 5.1 Scale economies in agrifood systems



## ...where food demand is shaped by biology

Figure 7.15 Interaction of conscious and unconscious mechanisms driving dietary intake



# The book starts with economic principles, taught graphically

Analytical diagrams are built up gradually,  
and can be taught in more or less depth

...and focus on food-related decisions

Figure 2.2.14  
The impact of a lower price on net sellers and net buyers

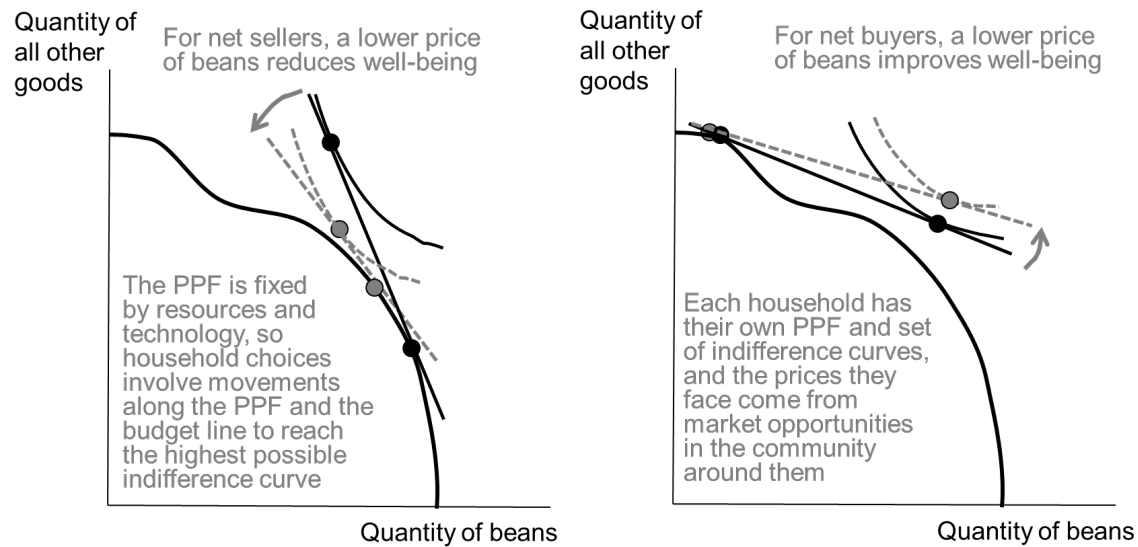
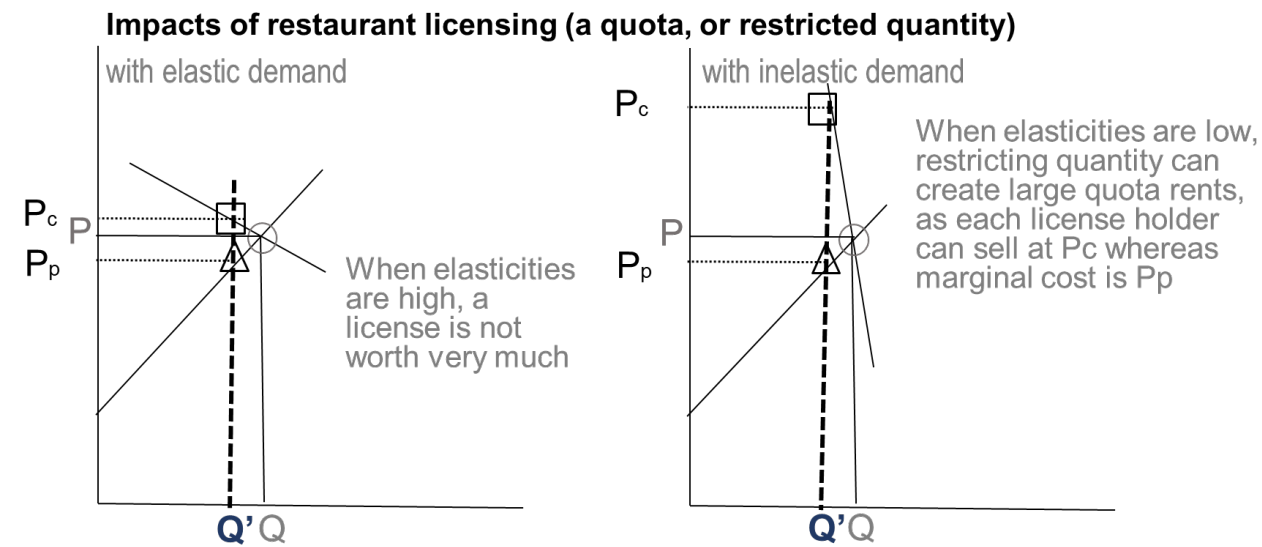


Figure 3.2.6  
Elasticities tell us how a quota affects prices paid and received



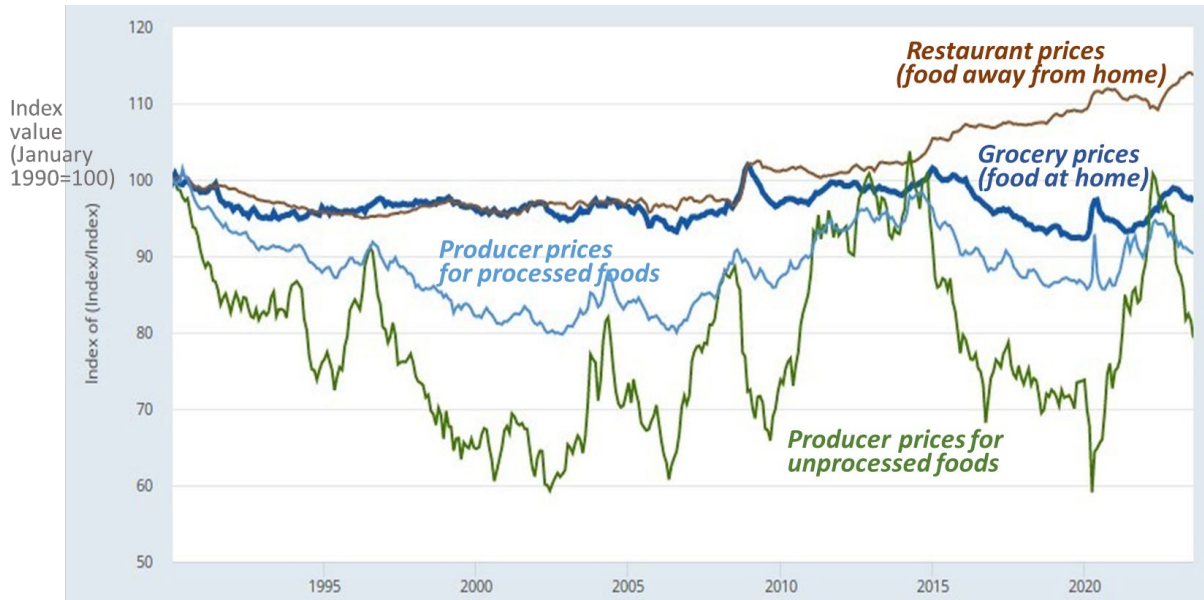
# The second half uses data to describe the food system

New images, linked to updated sources  
where possible

...with focus on policy choices and market trends

Fig. 7.13

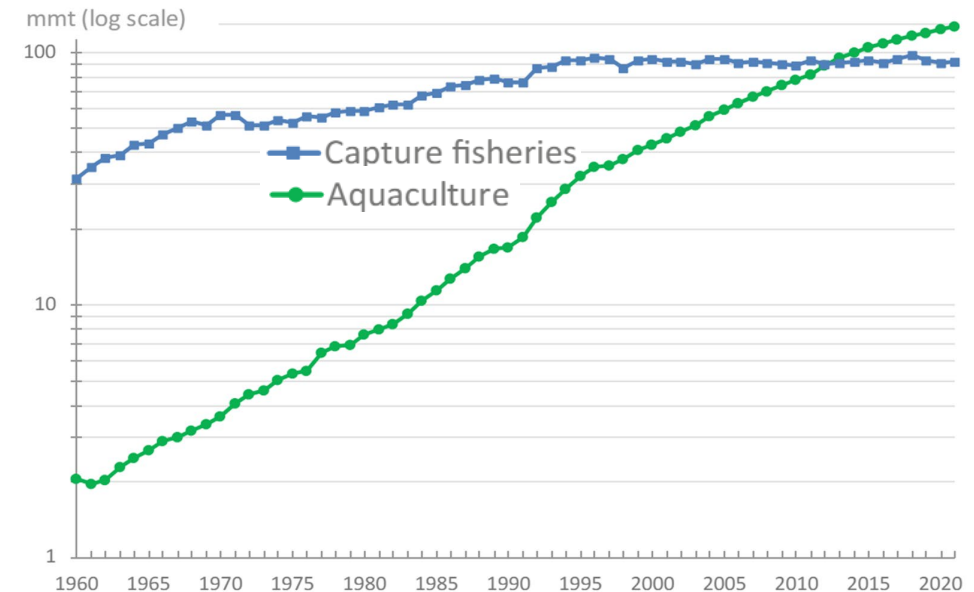
**U.S. price indexes for consumer and producer prices,  
January 1990– August 2023**



Source: Reproduced from Federal Reserve Economic Data [FRED], using price indexes from the U.S. Bureau of Labor Statistics as the average for each category relative to the overall U.S. consumer price index for all goods and services. Updated versions at <https://fred.stlouisfed.org/graph/?g=12MMI>

Fig. 12.4

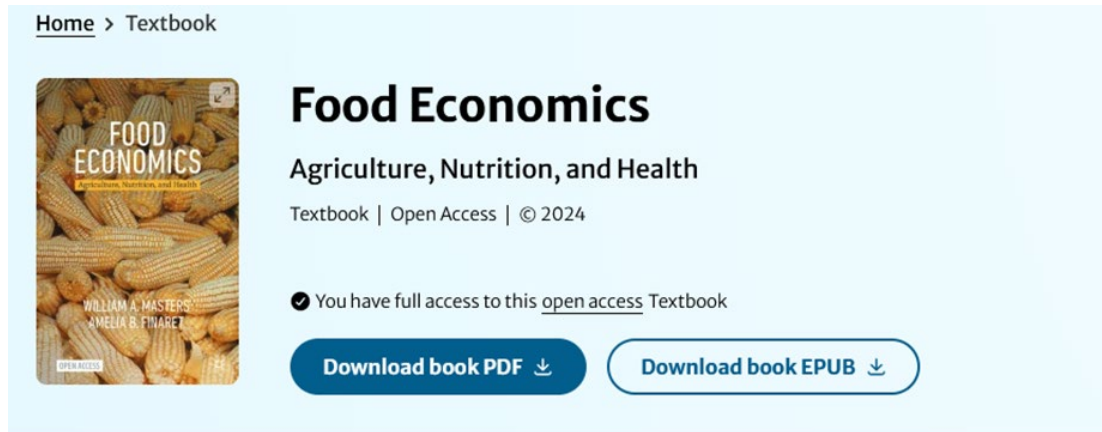
**The global transition from capture fisheries to aquaculture,  
1960–2021**



Source: Authors' chart showing total worldwide production, in millions of metric tons, using FAO data from the World Bank, World Development Indicators. Other regions, countries and updates are at <https://databank.worldbank.org/From-WildCaught-Fish-to-Aquaculture/id/b567055f>



# The book is open access, for use on any device (or in print)



## Features of the online version

- Syllabus can link to specific pages online
- Students can share comments on the text itself
- All figures are available as powerpoint slides
  - Analytical diagrams can be edited
  - Data visualizations can be updated

## Other teaching materials coming soon



## Food Economics: Agriculture, Nutrition and Health

A RESOURCES SITE AND TEACHING BLOG ON THE ECONOMICS OF FOOD

Welcome to our resource page for the new open-access textbook on *[Food Economics: Agriculture, Nutrition and Health](#)*, published in May 2024 from Palgrave MacMillan.

This site will soon have password-protected links to course materials (slides, exercise prompts, past exams and answer keys). For now we invite you to [subscribe to our elist](#) so that you can receive and share teaching material and updates related to the book.

## Class materials developed for and with Tufts students

- Warm-up exercise finding errors in ChatGPT
- Excel exercise on nutrient adequacy of real diets
- Weekly exercises to draw analytical diagrams matched to current news stories
- Midterm or course project (partial draft)
- Weekly exercises to make data visualizations with downloaded data from official sources
- Final or course project (report + slides)