

# RENNES SCHOOL OF BUSINESS

PRESENTS

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**Area of Excellence Agri-Business**

**PhD Module**

## **FOOD ECONOMICS**

### **DATES:**

**Session 1: 26, 27 & 28 29 October 2021**

**Session 2: 17 & 18 November 2021**

**CONTACT HOURS: 30 hours**

**TIME: 2 pm – 5 pm**

**CREDITS: 6 ECTS**

**PREREQUISITES: Microeconomics, Econometrics, R (optional).**

**VENUE: Online Microsoft Teams & B4 – Room 221**

## **MODULE DESCRIPTION**

Food has received a growing attention by researchers and policy makers over the past few years given the growing importance of food production systems and food consumption on our societies. The production of food has been recognized to play a significant role in the degradation of the environment, through the emission of greenhouse gases, the massive use of freshwater, the pollution of soils and water, and the decline of biodiversity. In addition, food consumption habits have been shown to significantly contribute to the rise of non-infectious diseases (cancers, diabetes, coronary diseases) increasing (premature) mortality. Furthermore, the growing demand for animal-based products over the last decades put the food system under great stress, leading to intensive farming conditions that are detrimental for animal welfare and that are criticized by a growing number of citizens.

The objective of this class is to discuss recent advances in food economics, and the mechanisms that can be implemented to limit the negative externalities of the food production system. First, we will review the foundations of food economics, looking at the household consumption models. Second, we will review the latest works in economics related to food consumption. We will review the scientific evidence about the externalities of food (environment, health, animal welfare). We will then focus on consumer behaviour and will investigate how public authorities can intervene to promote healthier diets and how innovation from private firm can help mitigating the externalities. We will devote our attention to the consumers' preferences and beliefs, public intervention tools (taxation, nudges) and market-based solutions (labels, new foods).

We will also briefly see how to implement the statistical methods of the papers using *R*.

## **CONTRIBUTION TO PROGRAMME LEARNING OBJECTIVES**

The module contributes to the methodological toolset of students with exposure to statistical analysis. In addition, its structure and coursework are both aimed at developing students' capacity to criticize a research paper and to develop a research paper. Those skills are valuable across all fields of business research.

### **MODULE INTENDED LEARNING OUTCOMES (ILOs):**

Upon completion of the module, you should be able to:

1. Estimate food elasticities using an Almost Ideal Demand System (AIDS).
2. Write papers on nudge interventions, taxation, labels
3. Know the main sources of externalities associated with food consumption
4. Estimate willingness-to-pay for food items
5. Understand the main challenges for new food

### **TOPICS COVERED:**

1. Foundations of Food Economics (Household Production Theory and Models)

2. Externalities of food
  - a. Environment (GHG, water use, soil use, biodiversity)
  - b. Health
  - c. Animal Welfare
3. Tools for healthier and more sustainable diets
  - a. Nudges
  - b. Taxation
  - c. Labels
4. New foods

#### **TEACHING METHODS:**

This class is mostly research oriented: it aims to show the latest advances in economic research about food economics. The participants to the class will learn about the current topics discussed in food economics and the empirical and experimental methods used by the latest works. The class is therefore organized as a discussion of academic papers listed in the bibliography below. We will also discuss the empirical models used in the papers and present R codes and simulations to illustrate them.

The students will be assessed in two ways. First, the students will have to write two reaction papers (see below for the description), in which they will act as referees and criticize the papers. Second, they will have to develop a research project by identifying a research question and by proposing an empirical strategy to address this question (see below for the description).

#### **METHODS OF ASSESSMENT:**

The assessment for the class will be made through two tools:

1. Two reaction papers ('mock' referee reports): A reaction paper must be structured in the same way as a referee report such that PhD students get familiar with the referee process and anticipate the criticisms. Reaction papers should be about 2-page long. Students are expected to discuss, among others, the main findings of the paper, the contribution to the literature, the quality and appropriateness of the methods.
2. A mock research project: The students design a paper without the data (as if they had the data). The students must work as they would do for a pre-registered report. They must develop the research project, including the motivation, a brief review of the literature, the empirical method they would use, their predictions, and the conditional conclusions. They present their work during the last session (30 / min per project).

Continuous/Final	Group/Individual	Assessment	Weight	ILOs assessed
Continuous	Individual	A first reaction paper	1/4	Capacity to criticize a scientific paper, to contribute to the existing literature and to anticipate the criticisms.
Continuous	Individual	A second reaction paper	1/4	
Final	Individual	A mock research project	1/2	Capacity to build a research project, to search for the literature, to set up an empirical strategy, and to anticipate the results.

#### **ACADEMIC INTEGRITY:**

Plagiarism is copying another's work or ideas. This includes sections (sentences, tables, diagrams) of books or articles, another student's work or text, diagram, data from the internet without proper referencing etc. Adding your name to group work in which you have not participated or letting a student who has not participated add his/her name to work is also considered as an offence and will lead to disciplinary action for all involved.

Plagiarism in any assessed work (continuous assessment, examinations and projects) is considered as a serious offence and will lead to disciplinary action.

Other forms of academic dishonesty are subject to disciplinary sanctions. Academic dishonesty, other than plagiarism may take any number of forms such as submission of the work more than once whether the earlier submission was at another institution, unless prior approval has been obtained, cheating on an examination, aiding another student's dishonesty, unauthorized or inappropriate use of computers, calculators and other forms of technology in course work, assignments or examinations.

#### **BIBLIOGRAPHY:**

##### **Foundations of Food Economics:**

- Household Production Theory and Models  
[https://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1127&context=econ\\_las\\_works\\_ngpapers](https://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1127&context=econ_las_works_ngpapers)
- Risk Preferences and Food Consumption
- The Acceptability of Food Policies  
<https://doi.org/10.3390/nu13051483>

##### **Food and the Environment**

- Global Environmental and Nutritional Assessment of National Food Supply Patterns: Insights from a Data Envelopment Analysis Approach  
<https://doi.org/10.1016/j.scitotenv.2020.142826>

##### **Taxation:**

- Refunding of a Climate Tax on Food Consumption in Sweden

<https://doi.org/10.1016/j.foodpol.2020.102021>

- Non-Pecuniary Effects of Sugar-Sweetened Beverage Policies  
<https://doi.org/10.1111/ajae.12134>
- Toward Optimal Meat Consumption  
<https://onlinelibrary.wiley.com/doi/10.1002/ajae.12016>
- The effectiveness of taxes in decreasing candy purchases  
<https://www.sciencedirect.com/science/article/pii/S0306919220301639>

**Willingness-to-pay:**

- The Extent of Hypothetical Bias in Willingness to Accept  
<https://onlinelibrary.wiley.com/doi/10.1111/ajae.12121>
- Assessing consumer willingness to pay for Arctic food products  
<https://www.sciencedirect.com/science/article/pii/S0306919220300300>
- Assessing Consumer and Producer Preferences for Animal Welfare Using a Common Elicitation Format  
<https://onlinelibrary.wiley.com/doi/10.1111/1477-9552.12297>
- Consumer Willingness to Pay Price Premiums for Credence Attributes of Livestock Products – A Meta-Analysis  
<https://onlinelibrary.wiley.com/doi/10.1111/1477-9552.12323>

**Nudges:**

- Nudging and corporate environmental responsibility: A natural field experiment  
<https://www.sciencedirect.com/science/article/pii/S030691922030155X>
- The effect of smileys as motivational incentives on children's fruit and vegetable choice, consumption and waste: A field experiment in schools in five European countries  
<https://www.sciencedirect.com/science/article/pii/S0306919220300361>
- Eating to save the planet: Evidence from a randomized controlled trial using individual-level food purchase data  
<https://www.sciencedirect.com/science/article/pii/S0306919220301548>
- Nudging to reduce meat consumption: Immediate and persistent effects of an intervention at a university restaurant  
<https://doi.org/10.1016/j.jeem.2018.06.005>

**Labels:**

- Food labelling and eco-friendly consumption: Experimental evidence from a Belgian supermarket  
<https://www.sciencedirect.com/science/article/pii/S0921800914003309>
- Consumer willingness to pay for redundant food labels  
<https://www.sciencedirect.com/science/article/pii/S0306919220301421>
- The Causal Impact of Medals on Wine Producers' Prices and the Gains from Participating in Contests  
<https://onlinelibrary.wiley.com/doi/10.1002/ajae.12037>

**New food:**

- The Power of Stories: Narratives and Information Framing Effects in Science Communication  
<https://onlinelibrary.wiley.com/doi/10.1002/ajae.12078>
- Willingness to Pay versus Willingness to Vote: Consumer and Voter Avoidance of Genetically Modified Foods  
<https://onlinelibrary.wiley.com/doi/10.1002/ajae.12001>
- Consumer preferences for farm-raised meat, lab-grown meat, and plant-based meat alternatives: Does information or brand matter?

<https://www.sciencedirect.com/science/article/pii/S0306919220301354>

**Meat consumption:**

- The Carnism Inventory: Measuring the ideology of eating animals

<https://doi.org/10.1016/j.appet.2017.02.011>

**Beliefs:**

- Understanding beliefs and concerns towards palm oil: Empirical evidence and policy implications

<https://www.sciencedirect.com/science/article/pii/S0306919219306074>

- A Belief-Preference Model of Choice for Experience and Credence Goods

<https://onlinelibrary.wiley.com/doi/10.1111/1477-9552.12334>

**SESSION PLAN:**

1. Foundations of Food Economics
2. Externalities of food
3. Tools for healthier and more sustainable diets
  - a. Nudges
  - b. Taxation
  - c. Labels
4. New food