

# Data & methods to support evidence-based food policies

## RESEARCH PROGRAM

### Objectives

The activities for this project are functional to the extended partnership PE10 ONFOODS ("Research and innovation network on food and nutrition Sustainability, Safety and Security – Working ON Foods"), funded by the Ministry of University and Research (MUR) with funds from the National Recovery and Resilience Plan (PNRR), which started in November 2022 and is due to be completed in November 2025. The successful candidate will contribute to the review of data and information on food policies in Europe (functional to activities within the OPENPOLI action in WP7.4), and to the analysis of nutritional and socio-demographic data resulting from the TRIM action which integrates information from the INRAN/SCAI 2005-6 nutrition survey and data from the ISTAT multiscopo survey for different years.

### Project Background

The research program is related to the activities of the ONFOODS project. ONFOODS is a basic research project based on an Italian partnership of 13 universities, 6 research centres and 6 private companies. The project objectives are: (1) to promote the sustainability of food production; (2) to increase the adherence to more sustainable dietary patterns; (3) to promote the sustainability of food distribution; (4) to increase the quality of foods and diets; (5) to develop smart innovative technologies for a sustainable food production and consumption; (6) to guarantee food safety and food security at whole population level and in specific vulnerable targets of the population. ONFOODS is based on a comprehensive approach, joining together and synergizing the strengths and competences of several different disciplines, ranging from social and juridical sciences to agricultural economics, food chemistry, food technology and engineering, logistics, microbiology, marketing, human nutrition, and many disciplines of medicine. ONFOODS is structured on seven spokes, each one focusing on a very specific, although wide, matter related to food production, transformation, and effect. More specifically, the team from the Department of Statistical Sciences

(STAT) is involved in Spoke 7 "Policy, Behaviour and Education"), whose focus is on developing models and instruments, to observe, analyse and predict food policies and business and consumers' behaviour. Research in this spoke targets planning, implementing, and promoting public actions, educational paths, and communication campaigns with the final aim of improving health and sustainability by preventing loss, surplus, and waste, and promoting a more informed food consumption.

## **Description of work**

Within the project, the unit of the Department of Statistical Sciences of the University of Bologna has specific responsibilities. The STAT team is co-leading Workpackage 7.4 within the Spoke, "Policies for Healthy and Sustainable Diets". The activities relevant for the team are the following: (1) review existing ex-post evaluations of public policies at the international level; (2) generate new evidence, using robust methods, evaluating international, European, and Italian national, regional policies; (3) produce of a set of evidence-based policy-oriented guidelines and set of recommendations based on findings and inputs from all project activities. The STAT unit will also contribute to Workpackage 1, "Understanding determinants and factors underlying food-related consumer behaviour." Currently, the following activities led by STAT are ongoing:

- Maintaining and updating an "open access" European Food Policy database, created within the OPENPOLI action within the project;
- Analyse a repeated cross-section of nutrition intake data-sets based on multiple imputation and matching from different official surveys;
- Estimation of price and income elasticities through demand models, taking into account greenhouse gas emission from diets, using household budget surveys and scanner data and accounting for quality-quantity trade-offs;
- Assess the role played by food prices and food inflation in shaping consumer food choices, using a large consumer panel dataset (just started)

Other activities within the project may be planned in the coming months, and the expected completion date is November 2025. Within this project, the STAT team explores information from two large data-set: a modified

ISTAT Multiscopo data-set combining years between 2005 and 2022, with imputed nutrition data; an extended large consumer panel data-set monitoring food purchases of more than 9,000 Italian households between 2019 and 2023. The latter data-set is currently under acquisition and will become available in July 2024. One of the aim of the project is to consolidate the team expertise on scanner data, and become a strategic hub for the use of scanner data for food policy evaluation purposes in Italy.

The grant will be for one year. The successful candidate will be part of

the research team of the Department of Statistical Sciences, which collaborates with other Departments from the University and other universities and research centres participating to the project. The successful candidate will contribute to the activities of ONFOODS project, more specifically the activities within Spoke 7, WP1 and WP4.

The successful candidate is expected to:

- Support the management and updating of the food policy database F-POD, updated through the action OPENPOLI (see <https://ricercatm.unibo.it/FoodPolicyDatabase/index.aspx>);
- Contribute to the modelling of consumer data (both from the modified Multiscopo survey and the large consumer panel), and more specifically to the evaluation of socio-economic disparities in food choices, and the role of food prices and inflation in shaping their healthiness and sustainability;
- Support the team in writing and finalizing project deliverables, research reports and scientific articles;
- Explore/write codes using STATA or R;
- Participate to project meetings;
- Contribute to the project administration, especially in relation to the management of the F-POD database.

## **GRANT OBJECTIVES, TRAINING AND RESEARCH PLAN**

The grant is for 12 months, with a starting date between June and July 2024.

## **Requisites for candidates**

The successful candidate should:

- a. Have previous (preferably post-doctoral) experience in national and/or international research projects;
- b. Master oral and written English language;
- c. Have previous experience in modelling economic data;
- d. Have a solid economic background;
- e. Have a good knowledge of statistical software and coding, preferably Stata

## **Grant objectives**

The specific objective of the training programme is to acquire expertise on the range of food policy options that are currently adopted or may be adopted by the Italian and European governments, based on quantitative evidence of their effectiveness.

## **Training**

The successful candidate will be trained in the following activities:

1. Manage an on-line food policy database
2. Manage large data-sets for subsequent statistical analysis
3. Run statistical analyses using Stata, including writing ad-hoc commands
4. Write scientific reports and papers

Training will include:

1. Supervision and guidance by members of the STAT research team
2. The opportunity to spend study/research periods at other institutions with a focus on quantitative analysis

## **Expected outputs**

At the end of the period the grant holder should have produced at least one working paper ready for journal submission on a topic relevant to the project.

## **Timeline of the research plan**

**Months 1-3:** Managing the F-POD database within ONFOODS: (a) updating the database; (b) managing international contributors and the advisory board of the F-POD database; (c) disseminating and promoting the database;

**Months 4-8:** Estimation of models and simulations using the modified IS-TAT multiscopo database;

**Months 9-12:** writing working papers and reports.