

## PEN virtual workshop:

# Approaches to the evaluation of nutrition policies: state of the art, challenges and new directions

## Overview

The 2-day PEN virtual workshop on “**Approaches to the evaluation of nutrition policies: state of the art, challenges and new directions**” took place on March 25-26, 2021. It was hosted by the Institute of Health Economics and Health Care Management at the Helmholtz Zentrum München in collaboration with the Department of Statistical Sciences “Paolo Fortunati” at the University of Bologna as part of the EU Joint Programming Initiative “A Healthy Diet For A Healthy Life” – Policy Evaluation Network (PEN).

Experts covered important topics on both, simulation modeling approaches (March 25) and ex-post econometric methods (March 26) that are used for the evaluation of dietary policies.

## PROGRAMM AND PRESENTED TOPICS

### **Day 1 Thu. 25 March: EX-ANTE SIMULATION MODELLING**

Moderated by Michael Laxy and Karl Emmert-Fees (Helmholtz Zentrum München (HMGU))

#### **Simulation modeling for the economic evaluation of population-based dietary policies - Karl Emmert-Fees (Helmholtz Zentrum München))**

This talk presented findings from a systematic scoping review on simulation modeling methods used for the evaluation of dietary policies. Emphasis was on evaluated nutritional targets, policy types, modeled pathways and corresponding limitations. Based on the reviewed literature several recommendations and challenges were derived.

*Karl Emmert-Fees is a doctoral researcher with Prof. Michael Laxy at the Research Unit Public Health and Prevention at Technical University Munich and the Institute for Health Economics and Healthcare Management at the Helmholtz Zentrum München. He is currently part of the PhD program “Medical Research in Epidemiology and Public Health” of the Munich Medical Research School at LMU Munich. The topic of his thesis is the application of simulation modeling for the economic evaluation of population-based dietary policy in Europe. He received his Master of Science in Public Health from LMU Munich.*

[See the slides presented by Karl Emmert-Fees](#)

**Cost Effective Strategies to Prevent Child and Adult Obesity and Improve Population Health - Steven Gortmaker (Harvard University)**

This talk reviewed recent findings from the CHOICES research group. Results include: projecting future obesity rates and health disparities in the United States; evaluating the impact of recent dietary policy changes; cost-effectiveness modeling of sugary beverage taxes in the United States, and impact on population health and health disparities.

*Steve Gortmaker is Professor of the Practice of Health Sociology at the Harvard Chan School of Public Health. He directs the Childhood Obesity Intervention Cost-Effectiveness Study (CHOICES). CHOICES is working to identify cost-effective prevention policies and programs that will help more children achieve and maintain a healthy weight and improve health equity. These studies use cost-effectiveness analysis to compare the costs and outcomes of different policies and programs, and microsimulation models to create virtual populations based on large databases (e.g. US Census, National Health and Nutrition Examination Surveys, Behavioral Risk Factor Surveillance System). He and the CHOICES team have been conducting cost-effectiveness analyses with 22 state and city health departments in the US. Published studies include a four-paper obesity modeling series in the Lancet, and CHOICES papers in Health Affairs, Preventive Medicine, Pediatrics, Obesity, and the New England Journal of Medicine. He and colleagues have designed interventions that are low cost, easily disseminated, and sustainable, and evaluated them via randomized trials and quasi-experimental designs.*

[See the slides presented by Steve Gortmaker](#)

**Quantifying the potential effectiveness, cost-effectiveness, and equity of food policies around the world: examples from salt reformulation and sugar labelling policies - Chris Kypridemos (University of Liverpool)**

This talk drew on the recent experiences of the NCD Prevention and Food Policy Research Group at the University of Liverpool in modelling the wider impact of food policies with some emphasis on propagating uncertainty, model validation, and transparency.

*Chris Kypridemos is a Senior Lecturer in Public Health Informatics & Data Science with expertise in dynamic stochastic microsimulation. Originally from a clinical background, he gained his Master in Public Health from Dundee University with distinction in 2013 and his PhD in Public Health modelling from the University of Liverpool in 2016. He uses data to generate actionable evidence for decision-makers through epidemiological and policy modelling. Chris has developed the IMPACTNCD microsimulation framework that has been used in England and the US to quantify the effectiveness, cost-effectiveness, & equity of a wide range of interventions and public health policies.*

[See the slides presented by Chris Kypridemos](#)

## **Challenges in modelling food consumption and obesity for policy analysis - Franco Sassi (Imperial College London)**

The talk illustrated and provided a discussion of key challenges involved in modelling the complex relationships between food consumption, obesity and health in the context of simulation models designed to assess policy impacts. Challenges include accounting for both direct health impacts of food intakes and impacts mediated by adiposity; translating measures and characterisations of food intakes into health impacts; accounting for social multiplier effects, especially at the household level; accounting for food environment dimensions, including food prices.

*Professor Franco Sassi graduated with a degree in economics and a doctorate in health economics from the University of London in 2000. He is currently Chair in International Health Policy and Economics and Director of the Centre for Health Economics & Policy Innovation at Imperial College Business School, and a Senior Health Economist at the OECD (on leave). Previously he was Senior Lecturer in Health Policy at the London School of Economics and Political Science (LSE), and held adjunct and visiting positions at a number of universities in the US, including the University of California at Berkeley, Harvard University, the University of California at San Francisco, and Duke University — as well as at the at the Université de Montréal in Canada and at the Università Cattolica del Sacro Cuore in Rome. Professor Sassi's research focuses on economic analysis of health services, the economics of chronic disease prevention and measuring inequalities in access to healthcare. He is Principal Investigator and Project Coordinator on the European Commission funded Horizon 2020 project Science & Technology in childhood Obesity Policy (STOP). He is the lead author of Obesity and the Economics of Prevention: Fit not Fat (OECD and Edward Elgar, 2010), editor and author of Tackling Harmful Use: Economics and public health policy (OECD, 2015) and Promoting Health, preventing disease: The economic case (OUP, 2015); and author of a large number of publications on the economics of chronic disease prevention. He was awarded a 2000–2001 Commonwealth Fund Harkness Fellowship in Health Care Policy.*

[See the slides presented by Franco Sassi](#)

## **Day 2 Fri. 26 March: EX-POST ECONOMETRIC METHODS**

Moderated by Mario Mazzochi and Sara Capacci (University of Bologna (UNIBO))

Welcome and introduction to state of the art in quasi-experimental methods with application to food and physical activity - Sara Capacci (UNIBO) and Mario Mazzochi (UNIBO)

### **How well targeted are soda taxes? - Pierre Dubois (Toulouse School of Economics)**

Using micro longitudinal data, this talk showed how to exploit the panel dimension to estimate individual specific preferences in demand models. This can be useful for the evaluation of the targeting of soda taxes because we can relate preferences and counterfactual predictions to individual characteristics. An application to the UK showed that soda taxes are relatively effective at targeting the sugar intake of the young, are less successful at targeting the intake of those with high total dietary sugar, and are unlikely to be strongly regressive especially if consumers benefit from averted externalities.

*Pierre Dubois is professor of Economics at TSE, fellow of the CEPR and of the Institute for Fiscal Studies in London. Pr. Dubois has been visiting professor at the Department of Economics of Harvard University (2015, 2019-220), Managing Editor of the International Journal of Industrial Organization*

*from 2013 to 2018, Scientific Director of the Toulouse School of Economics during 2015-2019 and is currently associate editor of the European Economic Review and Co-Editor of the Journal of the European Economic Association (2021).*

[See the slides presented by Pierre Dubois](#)

### **Producer responses to dietary regulation - Timothy Beatty (University of California, UC Davis)**

The talk focused on distributional changes in diet quality over the last 30 years in the United States, paying particular attention to the role of product reformulation in changing diet quality. This is relevant for thinking producers' responses to soda taxes and other regulations. Estimates of the long run potential of soda taxes and other regulations to raise revenues and improve health depend critically on assumptions about producer behavior

*Timothy Beatty is a Professor in the Department of Agricultural and Resource Economics at the University of California, Davis. He studies the economics of food, nutrition, and health. He is currently the Director of the Gifford Center for Population Studies and a Director of the Agricultural and Applied Economics Association. He was previously the Editor of the American Journal of Agricultural Economics.*

[See the slides presented by Timothy Beatty](#)

### **Estimating the causal effect of soda taxes - David Frisvold (University of Iowa)**

This workshop section focused on: 1) evaluating the impact of SSB taxes using observational data, 2) defining counterfactual scenarios to estimate treatment effects for different outcomes, 3) methods/challenges in quasi-experimental evaluations, and 4) choosing the right outcomes for quasi-experimental methods.

*David Frisvold is an Associate Professor in the Department of Economics and a Senior Research Fellow and the Director of Social and Education Policy Research in the Public Policy Center at the University of Iowa. He is a NBER Research Associate and IZA Research Fellow. He has extensive experience using different types of data to evaluate the impact of taxes on sugary beverages throughout the United States on prices, product availability, purchases, and consumption.*

[See the slides presented by David Frisvold](#)

Detailed information on speakers and topics also available at:

<https://www.helmholtz-muenchen.de/igm/service/pen-workshop/index.html>