

Socio-economics of food quality and safety regulations

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Globalised trade in food means more choice for consumers. However, globalisation also has the potential to threaten human health. By bringing together scientists from around the globe the EU-funded project MoniQA (**M**onitoring and **Q**uality **A**ssurance in the Food Supply Chain) helps food manufacturers, retailers and regulatory bodies to cope with the challenges of a globalised food economy.

MoniQA provides support for a systematic assessment of socio-economic impacts of new EU food quality and safety regulations. Impact is evaluated in terms of efficiency, effectiveness, and consistency of application, and with respect to different stakeholders (consumers, industry, regulatory bodies, etc.).

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- Governance of food safety
- Review of evaluation methodologies
- Analysis on distributional risks in food chains
- Identification and improvement in fitting evaluation methodologies
- Generic evaluation framework
- Report on taxonomy of impact areas

Socio-economic impact assessment will enhance the effectiveness and the efficiency of new food quality and safety regulations addresses the melamine crisis and other emerging issues in food safety.

Developing an evaluation framework

Following the (regulatory) impact assessment guidelines published by the European Commission (EC 2005), MoniQA has developed a generic **evaluation framework** (EF) for assessing the impact of compliance with food safety regulations within an individual country, thus establishing a basis for systematically assessing the costs and benefits of alignment or harmonization at the multilateral level. In order to test this generic evaluation framework, **four case studies** on the likely and actual cost of new regulations and testing methods will be implemented:

- (a) Aflatoxins in hazelnuts (Turkey)
- (b) Melamine in dairy and other products (China),
- (c) T-2 and HT-2 toxins in cereals (Italy)
- (d) Dioxin testing (Germany and UK)

The **final output** will be a validated general evaluation framework, which provides insight into the impact of regulation in the food chain within and across different countries.

Towards a policy decision support system

MoniQA will develop a **decision support system (DSS)**, which compares the effectiveness of policy implementation at the level of individual business (micro) with the success of policies within and across countries (macro). Because there are so many stakeholders (e.g. small versus large enterprises, differences in risk profiles and management structures, sectors and geographic location, etc.) we need a tool that allows us to understand the different scenarios and facilitates policy decision making at the various levels (e.g. regional, country, EU etc.).

Final outputs:

- (1) Decision support system that allows the behaviour of individual companies and its impact to be separated, and provides a helpful tool for stakeholders at the policy-making level;
- (2) Socio-economic assessment of developments in analytical methods from a business-level perspective.

An evaluation toolbox

The EF and DSS will provide support for systematic assessment of new regulations in food quality and safety. This toolbox will provide information about:

- (1) Data availability, gaps, and quantitative and qualitative collection procedures;
- (2) Systematic classification of impact, linked to existing literature and knowledge
- (3) Validated results from the MoniQA case studies;
- (4) Up-to-date guidelines on evaluation strategies

The **final output** will be an evaluation toolbox, including validated procedures for the systematic assessment of food safety regulations both at the individual and the aggregate levels, which provides support for evaluators and policy-makers.

Progress in Year One

Our first year was devoted to a comprehensive review of current practices in evaluation procedures and the regulatory environment concerning food quality and safety, and more specifically:

- Role of stakeholders in the decision and implementation process
- Rules, standards, and regulations in the EU compared with the US and Codex legal frameworks
- Quality systems used in the agri-food sector
- Procedures for impact assessment of regulations and quantitative methodologies for estimating impacts.

Progress in Year Two

During the second year, the conceptual basis for the socio-economic analysis was established via two expert working groups communicating with social scientists outside the network (Expert WG) and other MoniQA WG (Socio-economic WG). The Expert and Socio-economic working groups have:

- Designed a theoretical evaluation framework at the macro level
- Formulated a preliminary structure for a decision support system which considers the micro level
- Outlined a set of case-studies for the empirical application of the assessment frameworks

Case Studies Spotlight: T-2 and HT-2 toxins in cereals and cereal products (EU and Italy).

An impact assessment exercise will be carried out on a hypothetical regulatory proposal, which sets the maximum limits for these two mycotoxins in cereals. The analysis will be performed both at the EU and the country-level (Italy).

The governance of food safety: a web of rules, standards and regulations

The foundation of the current European policy framework governing food quality and safety was laid down in response to food scandals during the 1990s. The BSE-scandal in particular reduced consumer confidence levels and prompted a systematic reform of regulatory and institutional systems in the EU and the member states. Prior to and during the midst of these food scandals, risk assessment tasks as well as the representation of both producer- and consumer-interests often rested with the same Government department in European member states.

As a consequence, institutions were locked into a conflict of interest between protecting producers and consumers. The European Commission White Paper on Food Safety 2000 shed light on the institutional inability to cope with both tasks, and forced policy-makers to redefine the framework essential to ensure the functional and institutional separation of three key components in risk analysis, namely risk assessment (scientific advice and information analysis), risk management (regulation and control) and risk communication.

As a direct consequence of the white paper, the European Food Safety Agency (EFSA) – mandated to carry out and coordinate risk assessment and communication at EU level – was set up, and shortly after several member states also established a food agency similar to EFSA. At the national level, considerable differences still exist particularly with regard to effectiveness and efficiency of controls as well as application of the HACCP codex.

An executive summary of these and other deliverables is available to the public at www.moniqa.org/execs

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