Sustainable Food Systems and the Role of the Agricultural Economist in Policy Design

Krijn J. Poppe[1]

***Abstract* – I discuss the role of agricultural economists in policy design by presenting the case of the framework law on sustainable food systems. The European Commission is working on that framework law, and a group of experts of the EEAC has prepared a policy advise on its content.**
Such a proposal for a law is an artifact created by humans. Design thinking (aka design science) supports the creative process of delivering artifacts. This process is illustrated for three stages in design thinking: problem framing, design principles and solution thinking. Co-evolution of problem framing and later stages is common in addressing wicked problems. Agricultural economists focus on studies of human behaviour and evaluation of policy proposals. This paper argues that the tool box can be enriched with scientific methods from design thinking to better contribute to the policy design processes in times of change.

Introduction

We live in a challenging time. Covid-19 still troubles supply chains. The Russian invasion in Ukraine has led to turbulence in markets for energy, fertilizer and food. Climate change threatens harvests and biodiversity. It all aggravates the debate on our future: are we at a tipping point to take bold actions for a more sustainable world, or should we scale back ambitions?
In this address I would like to discuss the role of agricultural economists in this debate and make the point that we should not only explain human behaviour and evaluate policy proposals but also actively contribute to the design of food system policies.

Design thinking as a method

Agricultural economics develops over time. 'As a quasi-discipline agricultural economics should be reoriented to the grand challenges that require a food systems approach and consolidate its institutional strengths. [..] Food system economists should not only analyse but also design food systems at those levels.' (Fresco et al, 2021).

Design thinking tries to extend the boundaries of human and organizational capabilities by creating new and innovative artifacts. Artifacts are often material products but can also be software, a service or a new business concept. A policy(proposal) is also man-made and can be seen as an artifact that is designed.
In the next sections I illustrate the use of design thinking in three steps: Problem framing, design principles and solution thinking. The wicked problem to which this design thinking is applied are the grand challenges in the European food system and the proposal of the EU Commission to tackle these with a Framework law on sustainable food systems. This framework law is seen as the artifact that has to be created, and to which the advise the EEAC hopes to contribute (EEAC, forthcoming).
The work was carried out between October 2021 and June 2022 with an ad-hoc group of experts from the member states' councils on sustainable development.

Due to the Covid-19 situation all meetings were carried out online, with the exception of one meeting with stakeholders in Brussels. This hampered the use of creative tools, but was nevertheless a seamless process.

Problem framing

It is typical for wicked problems that they are socially complex with incomplete, contradictory, and changing requirements that are often difficult to recognize. Stakeholders typically do not agree on the problem description and they debate the problem and solutions based on different data, and with different interests and values (OECD, 2021). In such policy controversies the interaction between facts, interests and values makes the right framing a policy problem difficult, but also very important and part of the solution.
For our EEAC advise we could build upon literature that set out the sustainability issues in the food sector, calls for a systemic food system policy and some national work from advisory council but there is a lack of interesting designs for such a policy.
Discussing market imperfections and potential solutions we reformulated the problem as the need to redirect innovation from ever lower prices towards internalisation of external costs. This raises the issue of access to food for those with low incomes. We therefor designed a governance model for the food system in which social policies (income policy, minimum wages) are part of the solution space, and the problem of food access is treated as an income problem instead of a price problem.

Part of these discussions took place during the next stages of the design process, when design principles and solutions were discussed. In my experience this is characteristic in the design of a policy that has to address a wicked problem.

Design principles

Between problem framing and solution thinking it is useful to think about design principles. Although this might reduce the solution space, it can also help in

[1]Emeritus Wageningen Economic Research, The Hague, The Netherlands (krijn.poppe@hccnnet.nl).

thinking about ideas that might be part of the solution. It also helps a team to evaluate different proposed solutions. Design principles for the solution can also be seen as the pre-ambles of a law and the considerations that have to be taken into account when the law is applied to create more detailed regulation with policy instruments.
Article 39 of the Treaty of the Functioning of the EU, that is the basis for the Common Agricultural Policy, was used as an example to come forward with a core for a Framework Law on Sustainable Food Systems (Box 1).

Box 1. *General principles for a Framework law for sustainable food systems (as developed in EEAC, forthcoming).*

To guarantee a resilient European food system that ensures sustainable diets with low environmental and ethical impacts that contribute to food and nutrition security and to a healthy life for present and future generations by enabling that

1. healthy, sustainable diets are available for all European consumers at prices that reflect their true cost in coherence with 'the polluter pays' principle.
2. food is produced in adequate quantities, with processes that result in environmental and ethical performance that is as best as reasonably achievable and regenerate climate-resilient, healthy agro-systems.
3. the food system works as inclusively as possible and relations between food chain actors are balanced which results in livelihoods with fair incomes and working conditions for farmers and workers.
4. new technologies are developed and best available technologies in relation to climate change and ecosystem services are promoted, respecting the precautionary principle.

Solution thinking in the policy design

Ideation is a term often used in design thinking to come up with innovative artifacts. This is a stage where much creativity can be applied. Experience helps as well as a mental or more explicit model on how (in our case) the food system works, where there are promising new developments and where there are bottlenecks in innovation. Benchmarking with other sectors can also be inspirational. A sense of what is politically feasible also helps to come up with realistic policy advise.
I discuss important solutions that we present in the EEAC advise, as well as 2 suggestions on monitoring and governance. Benchmarking with other sectors led to the solution to treat where possible agriculture and the other actors in the food system in the same way as normal businesses. More than 90% of the agricultural production comes from producers that have a bank account, and can be treated as normal small and medium sized business. A similar reflection on the structure of the agricultural sector is behind the idea of certification. This is built upon the trend towards dedicated supply chains. Benchmarking with the energy transition let to the solution to oblige first stage food processors (dairy companies, slaughterhouses) to blend sustainable products into mainstream flows. This gives more sustainable farms a better position in the land market. It also incentivises food companies to promote these more sustainable products. The big advantage of a certification and blending instrument over an ETS-like system or other economic instruments on inputs or emissions at farm level, is that it directly supports the income of more sustainable farmers.
Old instruments like the FADN could be refit for new purposes in a Farm Sustainability Data Network (Poppe and Vrolijk, 2018). That is a fourth result of our solution thinking and an example of how knowledge of the past could inspire solutions.

Reflection and conclusion

Agricultural economists should not restrict themselves to the evaluation of proposals for a food system policy but actively contribute to its design. We do not have many tools in our toolbox to do this in a scientific mode. This is problematic. For a researcher active in such design, it leads to a risk of be seen as a political activist instead of scientific researcher. It also makes such work hard to publish which discourages the activity and leads to less quality control.
Against this background this paper offered an approach from design thinking. As such it is only a first attempt. The process of creating the EEAC advise was not explicitly set up as an example for a design exercise, the authors are not experts in it and the Covid-19 situation prevented the use of creative techniques in online sessions. Nevertheless, the explicit attention to problem framing, design principles and solution thinking proved to be useful and lead to – we think – interesting suggestions for a framework law on sustainable food systems.
My conclusion is therefor that the profession of agricultural economists could do itself and the world a favour by further exploring the path of design thinking in the discipline and enrich the toolbox.

References

EEAC (forthcoming in 2022): *Towards a sustainable food system: a policy brief on the framework law*. Brussels

Fresco, L.O., F. Geerling-Eiff, A.C. Hoes, L. van Wassenaer, K.J. Poppe and J.G.A.J. van der Vorst (2021): *Sustainable food systems: do agricultural economists have a role?* in: European Review of Agricultural Economics Vol 48(4) pp. 1–25.

OECD (2021) Making Better Policies for Food Systems, Paris.

[see also a longer version of this paper]