ORGANIZATIONAL ELEMENTS IN STANDARD DESIGN: COMPARING INTERNATIONAL SUSTAINABILITY SYSTEMS

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Abstract

Existing agricultural sustainability standards are rarely applied in Germany despite persistent public attention being paid to sustainable farming and growth in markets for sustainable food. Beside the effects of sustainability requirements, important effects of organizational elements in designing a standard are expected to influence farmers' acceptance thereof. The development of a utility model is the behavioural economic basis for further research on farmers' decision-making processes and preferences regarding sustainability standards design. In the presented preliminary study, organizational standard elements are identified from the literature within the following categories: transactional and direct costs, market effects, risk of application, and farmers' identification and social gain. These categories constitute the core elements of the utility model as basis for a future choice experiment.

Keywords

Sustainability, assessment systems, standards, farm-level decision-making, farm management

1 Introduction

Sustainability assessment systems have been developed in some European countries for example in France (cf. THIOLLET-SCHOLTUS & BOCKSTALLER, 2015), Italy (cf. PACCHINI ET AL., 2015), Ireland (cf. HENNESSY ET AL., 2013), Switzerland and Germany (cf. HÜLSBERGEN & KÜSTERMANN, 2007). From these initial scientific approaches, sustainability standards like the RISE SYSTEM (cf. HÄNI ET AL., 2008), ORIGIN GREEN (BORD BIA, 2013 and 2015) and the DLG-Certificate (DLG, 2016) resulted. Sustainability-related requirements, goals and the precision of sustainability assessment - similar to underlying organizational processes - differ significantly between the individual standards (SCHADER ET AL., 2012 and BOCKSTALLER ET AL., 2009). Differences in farmers' standards' acceptance can in large parts be explained by market-related mechanisms. In Germany, however, increasing demand for sustainable food has not yet led to higher participation in existing sustainability standards. This might also be due to impacts of organizational elements in the design of a standard. To improve current sustainability systems, we integrate insights from behavioural economics to study farmers' decision-making processes and preferences regarding the adoption of a sustainability standard.

2 Methodological approach

Farmers' decision-making processes can be explained using Lancaster's Characteristics Theory of Value (LANCASTER, 1966) and the Random Utility Theory of MCFADDEN (1974) by the following utility function:

$$U_{an} = V_{an} + \varepsilon_{an}$$

where U_{an} is the unobservable, latent utility for individual n associated with choice alternative a, V_{an} is the systematic measurable component of latent utility, and ε_{an} is the random or unexplainable component of utility associated with option a and individual n. For the development of an entire utility model as the behavioural economic basis, in order to evaluate the preferences of farmers for organizational standard design elements in future discrete choice experiments, we needed to conduct the presented preliminary study to identify core utility categories.

The preliminary study aims to identify organizational attributes and is initially based on organizational process requirements currently in use to specify different "voluntary sustainability

standards and other similar initiatives covering issues such as food quality and safety" of the International Trade Centre (ITC, 2016). In addition, an intensive literature review was carried out on farmers' preferences in willingness-to-accept (WTA) studies for agri-environmental programs because future sustainability standards might be market driven or fostered by public authorities. For an in-depth understanding of the reported preferences, it was necessary to examine their theoretical foundation within the new institutional economics and also to adopt approaches from the social and behavioural sciences. According to GRÜNER & FIETZ (2014) material, social and normative motivation must be considered to explain farmers' behaviour. They also identify framing effects, loss aversion, endowment effects, and the status quo bias as the most important behavioural anomalies. Current German sustainability standards are sustainability assessment approaches (DOLUSCHITZ ET AL., 2009) and not classical management systems. Therefore, it was inevitable to integrate a normative and a strategic level of utility to the model using elements of common management concepts. For model building, the impact of the identified organizational elements are classified in four effected utility dimensions.

3 Results

The analysis from the ITC database provided organizational elements mainly explicable with principle agent- and transactional cost theory. Requirements regarding standards audit and governance have important effects on realizable product prices and associated users' costs. We integrated these characteristics with prices and direct costs only, as they are predetermined by customer and standard owner. The major elements to explain farmers' preferences are summarized in table 1. Beside sales-oriented factors (**market effects**), effects on farmers' preferences are expected to arise from **transactional and direct costs** (e.g. consulting, information management) and standards adaptability by means of management elements (lowering users' **risk of application**). Additional support of **social gains and farmers' identification** with the standard are also expected to be important.

Table 1: Identified organizational standard elements

Utility dimensions	Transactional & direct costs	Market effects	Risk of application	Identification & social gains
Organizational elements	**data basis** used for sust. assessment	higher **product prices**	**management system** approach	**normative objectives**
	technical support for data provision	**cooperation** for sales	**individual objectives**	**innovations includable**
	offered **consulting** & information	standard **labelling**	**compliance** assessment	involvement in **standard setting**
	direct standard **related costs**		**timeframe** for implementation	**geographical** coverage of label

Source: Authors' own work.

4 Conclusions

Organizational elements regarding four different dimensions for farmers' utility could be identified and explained from the literature. For further research we will use the utility function to measure farmers' preferences for attributes in standard design. These attributes will be evaluated in discrete choice experiments, allowing us to draw conclusions on the decision making process and its correlation to farmers' sociodemographic characteristics. Based on the information obtained, improved standards can be developed and target groups will be identified.

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