Criteria for a system level evaluation of farm advisory services

Katrin Prager [a,*], Rachel Creaney [a], Altea Lorenzo-Arribas [b]

[a] The James Hutton Institute, Craigiebuckler, Aberdeen AB15 8QH, Scotland, UK
[b] Biomathematics and Statistics Scotland, Craigiebuckler, Aberdeen AB15 8QH, Scotland, UK

ABSTRACT

Agricultural advisory services are meant to provide farmers with relevant knowledge and networks for innovation, as well as adjustments to policy and markets in agriculture. Despite substantial investment into these services, there has been little evaluation of their performance and impact, in particular at a system level. A system level analysis is especially challenging in countries with a diverse and fragmented advisory community such as the United Kingdom. This paper proposes criteria for assessing advisory services based on a conceptual framework for analysing characteristics of advisory services as a component of the wider Agricultural Knowledge and Innovation System (AKIS). Using the example of the UK, we investigated characteristics pertaining to governance structures, capacity, management and advisory methods. Data were collected in an online survey of 80 agricultural advisory organisations. Findings showed that most criteria for functional advisory services were met: agricultural advisory organisations utilised diverse knowledge sources and cooperated to fill knowledge gaps; there was a stable workforce of advisors who received regular training; advisory organisations were flexible and adaptive; and all relevant advisory topics were covered. However, a number of client groups were not targeted by advisory organisations and some organisations used only a narrow range of advisory methods. The proposed criteria reflect a balance between a thorough assessment of a country's advisory services and the typically limited time and budget available for regular evaluations. The criteria and associated proxy indicators should be fine-tuned to reflect the individual country's situation, and quantitative survey data complemented by qualitative data.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

Evaluation activities in Europe appear to become more widespread, not least due to expenditure pressure and increasing complexity of public programmes and policies (Stern, 2004). The interest in evaluating the value or effectiveness of agricultural advisory services is not new, but has been much more common in developing countries, where donors wanted evidence that their investment was worthwhile (Anderson and Feder, 2004; Swanson and Rajalahti, 2010). Evaluations of advisory services in developed countries and in Europe are rare (Faure et al., 2012; OECD, 2015), and tend to focus on the farm level and specific advisory methods. In order to assess the entirety of advisory services, it is not sufficient to aggregate the results of farm level studies on effectiveness of farm advice, but they need to be conceptualised and analysed as part of

a system. This paper contributes criteria and evidence for evaluating advisory services at the level of a country, based on governance structures, capacity, management and advisory methods.

In times where advisory services are no longer organised centrally by a government agency but characterised by a diversity of individual and collective actors, organisational forms, methods and institutional structures (Cristopolos, 2010; Knierim et al., 2015; OECD, 2015), evaluation becomes increasingly complex. Information is typically available at a programme or project level (Faure et al., 2011), or for larger (public or private) organisations. In some cases, analyses are available for specific topics of advice such as environmental farming advice (DEFRA, 2013) or protecting farm labour from pesticide exposure (Labarthe et al., 2014). Other studies focus on the impact at the farm or advisor level (Dinar et al., 2007; Ingram, 2008; Ingram and Morris, 2007; Klerkx and Jansen, 2010; Knuth and Knierim, 2013; Sutherland et al., 2013 Knuth and Knierim, 2013; Sutherland et al., 2013) or on specific services (ADE, 2009; Klerkx et al., 2006). However, there continues to be a lack of systematic evaluation of advisory services at the national level, making it difficult to guide policy development within a country and to compare performances across countries. Evaluations

are important to identify gaps in the advisory system, to channel resources, and to improve the quality of services.

Farm advisory services are only one component within the larger Agricultural Knowledge and Innovation System (AKIS). The AKIS concept describes the exchange of knowledge and supporting services between diverse actors from the first, second or third sector in rural areas. As a component of the AKIS, advisory services feature in wider debates about the problems or benefits associated with the fragmentation of the system. Fragmentation appears to come about as a side-effect of the privatisation of extension services (Kidd et al., 2000); a process that has been described for the UK. Some consider a fragmented AKIS as problematic and promote the value of employing an integrated approach (DEFRA, 2013) not least because fragmentation "may lead to confusion among farmers about where to go for information, duplication and wasteful competition among providers" (Garforth et al., 2003: 300). For England, Curry et al. (2012) find that the disjuncture and unregulated nature of the AKIS have been frustrating for farmers and land managers. Roles in a mixed public-private advisory system are divided between different actors, with private advice provision on sustainable farm management being viewed as 'suboptimal' (Klerkx and Jansen, 2010). Others argue that a uniform national approach is seen as neither useful nor necessary. Acknowledging the diversity of farmers' practices and information needs, an array of providers that operate simultaneously, are required to address these needs. According to Klerkx and Proctor (2013), a benefit of greater advisor diversity is increased client orientation.

The embeddedness in the wider AKIS, contextual and political factors bring about numerous conceptual and methodological challenges for analysing the effectiveness and impact of advisory services. These challenges are linked to unclear causal relationships, the diversity and complexity of institutional options in the provision and funding of services, interrelationships with the broader policy, social and economic environment, and the intangible nature of services. This paper contributes to the literature on evaluating agricultural advisory services at a national level. We follow calls from Birner et al. (2009) for a 'best fit' approach and focus our attention on what kind of advisory system is best able to address the current and emerging knowledge needs of agricultural actors. We propose criteria for functional advisory services and link them to proxy indicators. The results from the associated empirical data can be used to assess the current state of a country's advisory services. Finally, we discuss issues associated with data collection and interpretation.

2. Conceptual framework and approach to evaluation

Actors and structures involved in advisory services represent a subsystem of the wider AKIS (Birner et al., 2006). The AKIS concept offers a multi-actor perspective designed to deal with the complexity and the diversity of information sources and channels in rural areas. The conception of an AKIS includes research and education, training, and advisory services (World Bank, 2012),[1] with the innovation system literature broadening this conception to emphasise the role of public funding and policy, market developments, as well as systemic intermediaries in innovation support (Klerkx and Leeuwis, 2009). Although the AKIS concept is increasingly recognised as a relevant concept at the European level (EU SCAR, 2013), its use by policy makers has remained limited until recently (Knierim et al., 2015).

Agricultural advisory services can be conceptualised as an intangible service activity (Gadrey, 2000), where the entity transformed by the services are the skills, knowledge and attitudes of the people involved in farming activities. The services can be provided by independent advisors and consultants, by organisations employing advisors such as government agencies, farmer-based organisations (FBOs) or non-governmental organisations (NGOs). The farmer-advisor relationship is embedded in the wider institutional context and regional/national policy objectives (Klerkx and Jansen, 2010; Labarthe and Laurent, 2013b Labarthe and Laurent, 2013b). Here, we adapt the definition by Birner et al. (2009) of agricultural advisory services to comprise the entire set of organisations that enable farmers to co-produce farm-level solutions by establishing service relationships with advisors so as to produce knowledge and enhance skills.

To operationalise the concept of advisory services, we draw on Birner et al. (2006) and Birner et al. (2009) who devised a framework to analyse the performance and impact of pluralistic agricultural advisory services. The authors specifically suggest that their framework be used to develop an assessment tool for agricultural advisory services. They distinguish between contextual factors and characteristics (design elements) of advisory services. Contextual factors are those variables that policy makers and advisory services managers can only influence indirectly or that are beyond their influence. They include the policy environment, the capacity of potential service providers (e.g. NGOs, private sector, state), the farming system and market access, as well as community aspects (e.g. land distribution, education levels, gender roles). The characteristics of advisory services can be influenced directly and include: (1) governance structures, (2) capacity, (3) management, and (4) advisory methods (see Supplementary material 1). Governance structures refer to the institutional options available for financing and providing advisory services, including the level of decentralisation and partnerships. Capacity refers to advisory staff, their training levels, client-advisor ratios, and infrastructure, while management includes the management style, monitoring and evaluation. Advisory methods include the number of clients, specificity of content, technologies used and orientation (target group).

Evaluations can have different objectives which are linked to the purpose of the evaluation. Berriet-Solliec et al. (2014) distinguish three objectives: to measure the impact; to understand the causal path that generates changes; and to support learning processes for stakeholders. The purpose of evaluating advisory services for a country overall is to increase the understanding of the services' current state, strengths and weaknesses. The objective is to identify and assess the characteristics of advisory services, in order to understand how changes are generated and outcomes produced (Chen, 1990). Ideally, evaluation results are used in policy processes to improve existing policy or develop new policy, although shortcomings are recognised (Meadowcroft and Steurer, 2013).

Faure et al. (2011) used Birner et al.'s framework to analyse programmes of advisory services for family farmers (ASFF) in two African countries, but limited their focus to selected characteristics of the system: its governance mechanisms and source of financing, the quality of field staff, and the methods used to deliver advice. They emphasised the interdependency among the system components, and that this interdependency could not be adequately understood by looking for linear cause-effect-relations. This example application of the framework suggests that a comprehensive analysis of an advisory system using empirical data at different scales (national policies, advisory organisations' budgets, farmer behaviour, knowledge and skills) would require extensive and expensive data collection (Labarthe et al., 2014), hence empirical

---

[1] An AKIS "indicates a system that links people and institutions to promote mutual learning and generate, share, and utilize agriculture related technology, knowledge, and information. The system integrates farmers, agricultural educators, researchers, and extensionists to harness knowledge and information from various sources for improved livelihoods. Farmers are at the heart of this knowledge triangle" (World Bank, 2012).