Enriching the farm-management consultancy theory: practice nexus

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Abstract. This paper reports findings from on-going research that is capturing and describing how experienced farm management consultants work with farmer clients to assist decision-making and enhance on-farm change. It will illustrate the value of empirical research by describing how an experienced New Zealand sheep and beef farm management consultant assesses the farm and farmer in the initial stages of a consultation. Based on qualitative case study research, data was gathered through in-depth interviews of the consultant. Transcribed interviews were analysed using qualitative data analysis techniques and the results verified with the consultant. The research illustrates how the consultant uses informal analysis grounded in his context-specific expertise to assess the farming enterprise. Informal triangulation, comparative analysis, benchmarking and pattern matching are used during the farm visit to assess and develop 'a rich picture' of the farm family, farm resources, production system and its physical and financial performance.

Keywords: Agricultural consultancy, expertise, decision-making, case study.

Introduction

Agricultural consultants are an important component of the New Zealand agricultural innovation system. However, little research has been undertaken that explores how they effect on-farm change with farmer clients. In New Zealand, the central government reforms of the mid 1980s led to an increase in the number of agricultural consultants who rely on direct payments from farmers for the bulk of their income. A shift away from central government funding of agricultural extension internationally has led to increased interest from industry, government agencies and academics in the role of agricultural consultants in shaping on-farm decisions and management by farmers (see for example Ingram 2008; Sutherland et al. 2013). The increased academic interest Ingram (2008, p. 406) argues is because 'the individual farm visit by an agricultural advisor remains one of the most powerful and effective methods of communication in the farming community and is highly valued by farmers'.

The focus of research internationally includes work that explores the role of agricultural consultants in mediating 'between ... the extremes of institutional science and land managers' (Proctor et al. 2012, p. 1697) and translating technical and scientific knowledge for farmers (Ingram 2008; Eastwood et al. 2012). A defining feature of the agricultural consultant's expertise is that they are experts and their expertise is grounded in practical 'know-how' knowledge of farming (Proctor et al. 2012). Although the expertise of agricultural consultants is recognised, little research to date has identified and described in depth how they effect change on farm.

The theory: praxis nexus

Prescriptive or normative research, it is argued, dominates the farm management literature (Gray et al. 2009; Kim and Cameron 2013). Such research has either provided models of how farmers should make decisions and solve problems or provided tools, processes and computer programmes to help farmer decision making. Over the history of farm management numerous reviews (e.g. Johnson 1963; Jensen 1977; Nix 1979; Giles and Renborg 1990; Malcolm 1990; Rougoor et al. 1998; Gray et al. 2009) have criticised the discipline for its inability to develop theory that is relevant and useful to practitioners. In most cases, the practitioners that were referred to were farmers rather than farm management consultants. Several authors (Howard and MacMillan 1991; Rougoor et al. 1998; Gray et al. 2009; Kim and Cameron 2013) argue that one way to improve this situation is to study farmer decision-making processes by way of qualitative case studies. Although such case studies have been undertaken since the 1990s (Rogers et al. 1996b; Williams et al. 1997; Gray et al. 1999), farm management remains dominated by prescriptive research.

The paucity of empirical or descriptive research into farmer decision making is even more emphatically evident in the research into the processes used by farm management consultants. In the discipline of farm management a number of normative approaches, tools and techniques have been developed, that farm management consultants can draw on. These include production economics, systems analysis, budgeting techniques, benchmarking, simulation modelling, whole farm planning and linear programming, most of which are covered in standard farm management texts (e.g. Shadbolt and Martin 2005; Kay et al. 2012). Since the mid-1990s,

New Zealand empirical studies have focused on processes used by 'expert' farm management consultants to build rapport (e.g. Williams et al. 1997) and problem solve with farmer clients (e.g. Rogers et al. 1996a; Gray et al. 1999; Kemp et al. 2002; Bruce 2013). However, what is lacking is a rich body of empirical-based theory on the decision-making processes used by farm management consultants with farmer clients.

The value of exploring experience based expertise in decision making was advanced by Klein (1997) and is the basis of what is referred to as naturalistic decision making (NDM). This research explores how people use experience based expertise to make decisions. Klein (1997, p. 337) argued that generic normative models of decision making were limited in application to 'well structured tasks' and that in order to enhance 'effective decision-making in ill-structured environments' the decision-making expertise of experienced practitioners needed to be explored. This area of research has identified that experts making decisions in the field in which they work do so in ways that contrast to the types of processes indicated in the normative literature. The expert decision makers studied made decisions through pattern matching rather than choice. That is, potential 'options are screened against a standard, rather than against each other to select the better option' (Lipshitz et al. 2001, p. 334). It is the assessed compatibility of the option with the situation and the decision-makers values that drives decision making rather than the identification of the best option as predicted in normative literature (Lipshitz et al. 2001). The decision-making process is described as being one 'of pattern matching and informal reasoning' (Lipshitz et al. 2001, pp. 334, 335). A further essential characteristic of expert decision making is that it is shown to be context and domain specific, reinforcing the limited value of generic models of decision making (Lipshitz et al. 2001).

This paper explores and reports on the preliminary results of an analysis of the field expertise of an experienced sheep and beef farm consultant. The results presented provide an illustration of the context specific expertise of the consultant and also highlight how concepts drawn from naturalistic decision-making literature and the growing case-study based farm-management consultancy literature are reflected in how the consultant processes the information he gathers and how he goes about assessing the farm situation and the farmer in the initial stage of the problem solving process.

Based on previous case-study research, the consultancy process is identified as including a problem-solving framework (Gray et al. 1999). The framework is described as comprising linked iterative stages: gather information; identify problem; determine alternatives; analyse alternatives; choose an alternative; plan implementation; and evaluate implementation (Gray et al. 1999). This paper will examine the information gathering phase by describing how an experienced sheep and beef consultant completes an assessment of a farm and farmer. This assessment shapes subsequent phases in the consultant's process, and is therefore critical to the problem that is identified, but importantly also the alternatives analysed and recommendations given as well as the nature of the on-going interaction the consultant has with the farmer client.

Research methods

A single case study, based on qualitative data, is the research strategy that guided the research process. Case study research is argued to have value when depth and richness of data is important in answering the research question (Blaikie 2007) as was the case in this research. Further, according to Ritchie (2003), qualitative data is well suited to case study research, particularly when, as in this research, the practice of the agricultural consultant needs to be understood in a 'real world' context. The agricultural consultant studied, has over 25 years experience as a consultant and the majority of this time he has worked in the region where he currently based. Three semi-structured interviews of between one to one and one half hours with the consultant were completed over the period from May 2012 to May 2013. The interviews were transcribed and then analysed using a form of qualitative data analysis recommended by Dey (1993). Framed by the existing literature, themes and concepts relevant to describing how the consultant developed an appreciation of the current farm situation were identified from across the interviews.

The advantage of the multiple interviews is that flexible and responsive questions could be used to gain an in-depth understanding of his practice. The results of each interview were verified with the consultant and gaps and aspects that were unclear explored and clarified in subsequent interviews.

Findings: farm and farmer assessment

Recommendations for farming system change were developed by the consultant based on an analysis of the farming system that incorporates a linked assessment of the biophysical and

financial attributes of the farm business and the farm decision makers. A 'rich picture' of the farm is built up by the consultant over successive visits to the farm. He explains:

> I want to build a picture in my mind and then I am constantly looking for things that reinforce images or data, visual or factual data that reinforces what the person has said, is actually happening or not *(Interview 2012)*.

This he refers to as 'ground truthing' and enables the consultant to both gain insights into the individual and also to ensure that 'there is no ambiguity when [the farmer] said something, what they meant was that, rather than this' (Interview 2012).

In building this picture the consultant always starts with 'what they're doing now', because 'there's a good reason why most farms have been farmed the way they have' (Interview 2013). The farm assessment is always based on a full farm inspection of the farm with the farmer and involved the gathering of information on the physical characteristics of the farm property and land type, the current enterprise mix, levels of performance of each enterprise and the management of the enterprises.

A key aspect of the biophysical assessment of the farm is an estimate of the different land management units on the farm, based on topography, soil type and climate. Such units will respond in a similar way under similar management. His rationale for this approach he explains:

> … your primary resource is your land – if you think about the particular characteristics – strengths, weaknesses and opportunities and constraints of each of these areas, then you are better able to design and plan an enduring management system, land use activity *(Interview 2012).*

Drawing on his local knowledge of farming systems on similar land types the consultant assesses the 'relative fit' of the current enterprise mix. The relative fit involves considering, not only the suitability of the livestock enterprise mix to the particular land type, but also, how well the feed demand of the enterprise mix matches the expected pasture growth profile. Through comparative analysis, benchmarking and classification the consultant builds up a rich picture of the farm. Comparative analysis of the farms enterprise mix and the appropriateness of the fit between the enterprises and the land farmed is done by the consultant based on his local knowledge of the land types, their relative strengths and weaknesses, the best land use for that land and a knowledge of the likely pasture growth profile for that land. The consultant articulates his reasoning:

> … logically does this particular combination of enterprises fit with this bio-physical situation of the farm? *(Interview 2012)*.

Farm performance data is benchmarked against district averages the consultant sources from his own experience and from industry data sources including those published in the Ministry of Primary Industries *Farm Monitoring Reports* (e.g. Ministry of Primary Industries 2013). The benchmarking exercise for the farm is moderated by the consultant based on his visual assessment of the biophysical attributes of the farm. He explains:

> I guess my yardstick ...is comparing the performance against my own internal benchmarks. What do I think these animals should be performing like on this farm? What should he be getting in terms of lambing performance in terms of lamb slaughter weights by age, cattle performance (Interview 2012).

As the consultant undertakes the farm tour, he is constantly matching (as suggested by the NDM literature, e.g. Lipshitz et al. 2001) what he observes with a mental image of what could be expected. Any disconnect in what he observes also contributes to his assessment and classification of the farmer. For example he describes how:

> I am looking at the physical resource, fencing and the stock-proofness of the fences, access, facilities because they are all important in understanding how intensively the farm is managed, but also how easy it is to work. I am looking at pasture and pasture quality...you're always looking at livestock. How hard are they being grazed, where have they just come from, what's the amount of residual cover left in the paddock they've just come out of, what is their condition like compared to what I would expect them to be like *(Interview 2012)*.

Although the biophysical consideration is emphasised as being undertaken first, a consideration of the financial performance occurs in conjunction with his assessment of the farm's biophysical attributes. It is an informal assessment based again on the consultants knowledge as to the relative profitability and financial investment required for different enterprises. However, the consultant also takes account in his considerations as to the complementarity that exists across the enterprises and the potential benefits gained from running multiple enterprises on the farm. This is an aspect of his assessment he acknowledges is not captured well through formal farm management tools.

Assessing the farmer

The agricultural consultant is assessing and classifying the farm decision makers during his interaction with them during the farm visit. As with his approach to the farm, he emphasises how his assessment is based on what he finds at the time of the visit:

> I always start with what people are doing and how well are they doing that and why are they doing that. And what money are they making out of it and what pleasure do they get out of it *(Interview 2013)*.

The consultant explores the motivations and aspirations of the farmer. The consultant provides examples of the types of questions he asks:

> 'Where do you want to be in five years time?' 'What are you thinking of?'...'How happy are you?' 'What pisses you off the most?' 'What gives you the most grief?' *(Interview 2013)*.

The farmer's abilities and personality are considered also as part of the consultant's assessment. The consultant gives an example of a component of his assessment of a farmer:

> How credible is this guy in terms of what he says and how well is it a reflection of what he has actually done or said he is going to do *(Interview 2012)*.

Attributes of the individual that may be contributing to the current situation on the farm are also sought:

> Are they head down bum up sort of focus, you know can't see the big picture for the trees ... does he listen with his mouth; is he a doer, or a talker or a thinker? *(Interview 2012).*

He continues:

> What do their standards measure up like compared to my standards? Do they think their stock look pretty bloody good or are they thinking these stock are looking pretty poor? *(Interview 2013)*.

Conclusion

It can be argued that the description of how the expert farm-management consultant undertakes an initial assessment of the farm and farmer conforms loosely to the information gathering phase of the consultancy problem solving framework described in Gray et al. (1999). Likewise, practices and techniques recommended as useful in the normative literature including benchmarking and comparative analysis are also referred to and evident in the practice of the consultant. However, the context dependent and inter related process the consultant uses to bring together an assessment of the biophysical elements of the farm and the farmer are usefully extended by referencing to concepts included in the naturalistic decision making literature (e.g. Klein 1997; Lipshitz et al. 2001).

The farm management literature to date does not capture the richness or depth of the analysis and knowledge an expert agricultural consultant uses when effecting change on farm. The normative literature that dominates farm management would be greatly enhanced through empirical studies of experts who have, through experience, developed practice that draws on formal theory and techniques but couches it in ways that are embedded in a deep understanding of farming and farmers. This research illustrates the diverse and interconnected processes and techniques one expert consultant employs when assessing and developing recommendations for a client. This research confirms the value of conducting empirical research to inform and extend normative farm management theory. Further case-study research of expert practitioners in agriculture is needed to extend the existing empirical theory of farm management consultancy research. Future papers will extend the analysis and description of how this expert agricultural consultant defines and analyses problems deemed relevant to the farm and farmer.

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