Intuition, the farmers’ primary decision process. A review and analysis

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**ABSTRACT**

Intuition is a critical component of farmers’ decision making and underlies human capital. A model of decision making, including intuition as a factor, was developed and used to determine the important variables associated with intuition. Structural equation modelling enabled relating farm outputs to the components in the model. The components included management style, experience, intelligence, decision reflection, self-critiquing, and similar.

Intuitive ability, relative to basic managerial ability (planning and implementation skills), proved to be critically important in achieving objectives. The pre-requisites of good intuition were experience, technical and decision theory knowledge, and, in part, anticipation skills. Developing successful intuition requires consulting widely, personal reflection and critiquing in a constantly evolving decision skill. The model was original and the first to integrate the factors giving rise to business decision making intuition. The results make it clear how to improve intuition, and underpin understanding farmers and their modus operandi.

1. Introduction

1.1. The situation

The concept of human capital (Heckman, 2000; Skuras et al., 2005), a manager’s stock of knowledge, habits, as well as their social, personality and creative attributes, is important in understanding the management of any business. When dealing with farm issues, being familiar with the concept, its components and their relationships is beneficial as they influence rural outcomes.

A decision maker's intuition exemplifies many of the factors making up human capital and, as a result, significantly influences the decision making success of most businesses. However, little is known about the importance of these factors influencing a manager's intuition so study in this area is likely to be valuable. Social capital theory (Adler and Kwon, 2000; Sorenson et al., 2009) is also likely to be relevant through manager interactions with significant others.

When reviewing decision making theories it is clear the concepts proposed range from formal decision theory (Anderson et al., 1977) through to the informal use of intuition. The former proposes that decisions should be based on careful analyses leading to maximising expected utility, or some modification that takes into account, for example, either a lexicographic (ordered ranking) or satisfying (achieving minimum attainments) objective system. This decision process assumes the full list of alternatives are comprehensively analysed using various models based on full data availability. The reality of human responses to decision problems is usually somewhat different. Fig. 1, based on a review of, primarily, the literature listed in the sub boxes of Fig. 1, portrays this situation and suggests the other extreme of the formal decision process is the dominant use of intuition.

Considering the full range of business organisations, a small number of managers will tend towards the formal theory using the processes highlighted in the top box of Fig. 1, but the majority will be somewhere between the extremes (Groves et al., 2011) exemplifying that there is a continuum encompassing the formal to the informal decision systems and processes. A range of factors impact on the modification of the formal to the informal as exemplified in the ‘modifying’ box in Fig. 1.

The nature of the decision problem also influences the approach (Dunwoody et al., 2000) as does the decision maker’s decision fit preferences (Betsch and Kunz, 2008). Some commentators, however, suggest decision makers choose to work at one end of the spectrum (Wang et al., 2015), and still more suggest the processes have similarities (Horstmann et al., 2009). Whatever the case, the use of intuition is an important aspect of the decision process in nearly all sectors of society. Indeed, many businesses do not have the structure or expertise to follow the formal process, nor the determination or desire to do so. Whether tactical or strategic decisions, most managers largely use their intuition in arriving at a conclusion (Evans et al., 1989; Harling, 1992; Ohlmer, 2001; Ekanem and Smallbone, 2007; McCown et al., 2012; Nuthall, 2012) highlighting that intuition is a critical process for study.

Learning more about intuition will help ensure systems can be put in place for improving farm managers’ intuition and, consequently,
production efficiency and goal achievement. Equally as important, understanding how farmers operate (Beedell and Rehman, 2000; Burton, 2004) is a component to developing realistic models for use in agricultural studies in general. The work reported in this article moves in these directions through reviewing past studies on intuition, which mainly turn out to be non-agricultural, and using this knowledge to develop a hypothesised model of overall managerial ability which highlights intuition as a key component. This model is grounded in the literature (Nuthall and Old, 2018) and logic, and is quantified using data from surveyed farm businesses.

From the large variation in outcomes across similar farms it is clear that some managers’ intuition and decision systems serve them better than their colleagues’. This provides a set of data to explore the nature, contribution and methods of acquiring successful intuition and is used to test the hypothesis. Finally a conclusion is drawn following a discussion emphasizing possible methods of improving a manager’s intuition.

1.2. Decision processes in perspective

In past research, intuition has not been sufficiently stressed in the extensive history of decision making studies. The range (Fig. 1) includes risk analyses through to rationality assessments. In briefly referring to some of this work (the full list of references on which the model and its factors are based is listed in the inner boxes of Fig. 1) it is relevant to note Simon (1959) was an early worker questioning the overriding objective of maximising profit and talked about ‘bounded rationality’ (Selten, 1990). Eventually work on multi criteria decision making (e.g. Sumpsi et al., 1997) appeared, as did the inclusion of risk as an element in decisions. Dillon (1971), and others, emphasised the relationship between utility and risk attitude leading to work on risk, objectives and decision making (Anderson et al., 1977; Hardaker and Lien, 2010). Similarly there has been extensive work on technology adoption decisions and risk (e.g. Marra et al., 2003). Concurrently the psychological features of managers as a factor in primary production decision making started to be investigated (Willock et al., 1999; Hanson et al., 2010; Schleifer, 2012), and studies on managerial ability (Trip et al., 2002; Byma and Tauer, 2010) and decision processes were recognised as being important in understanding efficiency and decisions (Upton and Haworth, 1987; Rougour et al., 1998; Saaty, 2004). However, despite all this work, Chavas et al. (2010) note (p 370) ‘our understanding of farmers’ decision-making process remains incomplete’. Accordingly, intuition is one obvious and important component of the decision process that needs to be explored and quantified. The intuition studies that appear in the literature are largely qualitative in nature and do not encompass the full range of variables likely to be components in a comprehensive model. The objective of this work is to move towards rectifying these omissions.

The concept of intuitive decision making is particularly relevant to smaller, often family, businesses. As most farms have sole proprietor based ownership and management systems, or similar (partnerships/trusts ...), decisions are made by the proprietor (manager) utilizing
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