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Expand or exit? Strategic decisions in milk production

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ABSTRACT

This study analyzes how farmers' values influence plans to expand, maintain, or exit dairy production. Empirical data are from a survey of 500 farmers from a Swedish dairy marketing cooperative (63% responding). Factor analysis is used to identify underlying value constructs, and multinomial logistic regression analysis is used to investigate the influence of the value constructs on strategic plans.

Results show that farmers hold separate identity, business, and farm-living values. The identity value construct is strongly correlated with the other two, suggesting that for some farmers, identity is more coupled with business management, whereas for others identity is more tied to farm-living. At the same time, it is the business value construct that is most significant in explaining changes in production, exerting a positive influence on both planned exit and expansion, whereas the identity and farm-living value constructs show a more mixed influence on farmers' strategic planning.

1. Introduction

There is clear indication of an on-going structural change in the primary agricultural sector throughout most of Europe and North America. Dairy farms, in line with many other sub-sectors, are becoming fewer and larger (see Hansson (2008a) for a review from the Nordic countries; Tauer and Mishra (2006) for the US), indicating that some farmers are making strategic decisions to expand production whereas others are choosing to exit dairy production. To better understand the structural development of the dairy production sector, there is a need for more knowledge of the factors that influence farmers' strategic decision processes.

A number of studies have investigated farm business development with an interest in explaining structural changes. Weiss (1999), for example, found that farmers' age, education, gender, off-farm employment, and family situation, together with farm size were significant in explaining farm survival and growth in animal units. Rizov and Mathijs (2003) found that similar farmer and farm characteristics were significant in explaining survival and growth, but also that market and industry characteristics, such as access to product markets, and functioning land, credit and labor markets, play a significant role in how farms develop.

The price of milk has also been shown to influence strategic development at the farm level. Foltz (2004), for example, found that the market price of milk had a significant positive influence on Connecticut dairy farmers' decisions to stay in business and to expand, whereas variance in price had a negative influence on the same two decisions. At the same time, Foltz found that structural factors also influence decision outcomes, such as a negative effect of population density on decisions to stay in business, and a positive effect of the number of farms in town on decisions to expand.

Technology is yet another factor that has been shown to influence dairy farmers' strategic decisions. Jones (1999), for example, shows that expansion may be the only choice for farmers who want to utilize modern technology, such as milking parlors or automatic milking systems.

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Stahl et al. (1999) reports that the successful expansions of dairy farms in Minnesota were linked with choices of technology, including free-stall stabling, milking parlors, bunker silos, and reduced-labor manure management systems.

It is important to note that much of the farm business literature recognizes the need to include non-economic factors in the study of farm business development. Building on the basic premise forwarded in Gasson (1973; further developed in Gasson et al. (1988); and Gasson et al. (1993)), there is widespread recognition that family farms are governed by integrated (social) farm household goals and (economic) farm business goals (e.g. Ilbery, 1983; Willock et al., 1999; Maybery et al., 2005). Studies such as Mäkinen et al. (2009) show the importance of including factors such as farm family lifestyle play to understand business success. At the same time, many studies show that farmers may prioritize their economic and non-economic goals differently, and that these different priorities can be linked to business development outcomes (e.g. Hansson, 2008b; Vesterlund Olsen and Lund, 2011).

While many of the forenamed studies are valuable for understanding the development of farm businesses *ex post*, they provide limited insight into farmers' ongoing decision and planning process. Väre et al. (2010) found that implemented strategic changes on farms are not necessarily the outcome of farmers' intended strategic plans. Their study of planned versus actual generational succession of farm businesses shows that Mintzberg and Waters' (1985) notion of intended versus realized strategies—where firms' strategic plans are modified as the realities of implementation unfold—likely holds in farm business strategic development.

At the same time, even though strategic plans may be an uncertain indicator of enacted strategic change, farmers planning a strategic change are in a process of collecting and processing information. Öhlmer et al. (1998) identified planning as a distinct sub-process in the analysis and choice phase of farmers' strategic decision-making process. They also note that as the process moves towards implementation, decision-makers will continue to add information and modify their intentions accordingly. This suggests that, if firms with strategic plans to expand or exit dairy production can be identified, there may be an opportunity to influence their development.

1.1. Strategic planning and decision-makers' values

Chandler (1962) describes strategy as plans for the allocation of resources and courses of action that are based on the long-range goals and objectives of a firm. In the planning process, managers make decisions that set the course for their longer-term actions and the development of their firm. Thus, strategic planning is a decision process that links underlying goals and objectives to a firm's actions and development.

In trying to understand the strategic development of small firms, Stanworth and Curran (1973) report that entrepreneurs may be driven to develop and grow their firms by different types of goals and values. Stanworth and Curran distinguish between entrepreneurs who are more driven by the intrinsic values of their business—the actual production and/or the firm itself; entrepreneurs who are more driven by commercial values, such as earnings and profits; and entrepreneurs who are more driven by identity values, such as being recognized for management ability.

Öhlmer et al. (1998) note that values and goals are generally considered to be a significant element in decision processes, and that they are commonly understood to be established before the start of farmers' decision processes. Though there is some debate as to the degree of *a priori* rationalization versus after-rationalization, decision choices can be expected to be consistent with the decision-maker's values to avoid undesirable cognitive dissonance (Festinger, 1957).

Further supporting the notion that values play a role in strategic planning, Lunneryd and Öhlmer (2009) report evidence of the influence of values in strategic choices. The influence they detect, however, is less directly in the evaluation of choice options, but rather in the recognition and processing of information, and the forecasting of consequences. This again suggests that values play a significant role in the identification of strategic choice options and subsequent implementation.

While there are differences in the literature about how to define the concept of values, there is some consensus that "the values construct concerns (a) beliefs, (b) desirable end states or behaviors, (c) trans-situational guides, (d) selection and evaluation of behavior and events, and (e) the relative ordering of beliefs, desirable end states or behavior, or guides. These features are all consistent with the suggestion that the value system is a stable meaning-producing superordinate cognitive structure" (Rohan, 2000, p. 257).

Based on the literature, Rohan (2000) builds an argument for how value priorities (the organization of individual values in integrated value systems) cause attitudinal and behavioral decisions. In her argument, personal value systems create and are created by a world view, giving a basis for the formation of ideology and goals for both attitudinal and behavioral decision making. Thus, while not entirely consistent, there is general agreement in the phycology literature that values (or more correctly in Rohan's taxonomy, value systems) underlie decision outcomes.

Rokeach (1973) defines values as relatively enduring beliefs about the goodness or badness of a "mode of conduct or end-state". Rokeach makes the distinction between values that are focused on the desirability of an end-state, which he calls terminal values; and values that are focused on the desirability of a mode of conduct, termed intrinsic values. Regardless of the type, values are said to give rise to attitudes and goals, which in turn provide the basis for making strategic decisions (Gasson, 1973; Kotey and Meredith, 1997; Lunneryd and Öhlmer, 2009; Rokeach, 1973).

In a study investigating farmers' goals and values, Gasson defines values as "a more permanent property of the individual, less liable to change with time and circumstance. A value is a conception of the desirable referring to any aspect of a situation, object or event that has a preferential implication of being good or bad, right or wrong" (Gasson, 1973, p. 524). Gasson (1973, 1974) classifies values as: instrumental, emphasizing material rewards; social, emphasizing interpersonal