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Risk and Planning in Agriculture: How Planning on Dairy Farms in Ireland Is Affected by Farmers' Regulatory Focus

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Synopsis

This article examines how planning on dairy farms is affected by farmers' motivations. It argues that a farmer's choice of expansion strategies can be specified in terms of risk decision-making and understood as either prevention-focused or promotion-focused motivation. Prevention-focus is based on conservative approach to activities that avoid losses and is based on safety and responsibilities, while promotion focus is concerned with higher level gains such as advancement and accomplishment. This relationship was empirically examined using mediated regression analyses where promotion /prevention focus was the independent variable and its effect on total milk production via planned expansion strategies was examined. The results indicate that promotion focus among farmers has an indirect effect on farm expansion via planning strategies that incur greater risk to the farm enterprise. Regulatory focus on the part of farmers has an influence on farmers' planning and risk management activities and must be accounted for in the design and implementation of policy and risk management tools in agriculture.

Introduction and Background

Economic planning in agriculture is beset by uncertainty both in economic prospects

and in the input-output transformation rate. The viability of farming enterprises relies on the decision-making of individual farmers. When aggregated across large numbers farms, these decisions have the potential to mitigate or enhance economic, environmental and food security risks at a national or regional level. The productivity and profitability objectives set out by farmers are framed by agricultural and environmental policy as well as the values they associate with the farming vocation. Understanding the motivation behind farmers' plans and how it relates to action is important for policy makers as they seek to anticipate the outcomes from policy reform and guide policy implementation and communication. This study capitalized on the unique opportunity afforded by the removal of milk quotas in European dairy farming to consider the role of regulatory focus (a form of motivated reasoning) in shaping farmers' production plans and risk-taking. The behavioural approach used in this paper sits alongside an extensive economic literature on how quota systems influence the production decisions of farmers. Production quotas are typically introduced to support farmers' income and reduce business risk. Paradoxically these policies may lead to more risk for farmers as they increase financial risk through higher levels of borrowing.^(5,6) Quota systems have been shown to impact the cost of agricultural labour and create an imbalance

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between farm income and agricultural land values. The focus of this paper is on farmers' planning activity in the transition period around the removal of quota. It provides an insight into the behavioural components of farmers' decision-making as they react to an exogenous shock arising from this regulatory change.

Issues and Questions Considered

The approach taken here uses Regulatory Focus Theory (RFT) to examine whether chronic dispositional modes of self-regulation related to approach or avoidance thinking have a significant influence on farmers' judgement and decision-making. The removal of milk quotas provides a rare context for a study of this type. Farmers emerged from a generation-long regime where milk quotas were a dominant policy instrument that constrained production and allowed for the imposition of punitive super levies on farmers in those cases where they exceeded their allowed quota.

The removal of quotas in April 2015 contributed to higher levels of volatility in global milk prices and it coincided with higher variation in input costs. In Europe, Irish dairy farming experienced the most dramatic shift, with the national herd increasing by 9.9% and an accompanied 14% increase in milk production. The sharp increase in supply occurred at a time when global factors influencing demand led to a subsequent fall in the price index for milk and the incomes of dairy farmers in the year to April 2016.⁽¹⁵⁾ It is in this context that we consider how regulatory focus influences production plans. We analyse whether the expansionary plans of Irish dairy farmers are resilient to adverse conditions during this period of uncertainty in agriculture.

The existing literature alerts us to the potential role that promotion-framed communication can play in risk perception and risk behaviour. Although this study does not directly address the influence of risk communication on farmers' risk perception and risk behaviour, it is instructive to note how the abolition of milk quotas was framed by the dominant organisations tasked with policy implementation, agricultural research and farmer representation in Ireland. Ireland's natural environment has the capacity to support relatively low-cost, grass-based milk production. This was identified as a key competitive advantage during the expansionary phase. A report published by the main government agricultural research agency in collaboration with a major Irish bank argued that the removal of quotas

provided an opportunity for farmers to fund expansion through increased borrowing. The uncertainties around participating in a more volatile market were attenuated in favour of a positive message about opportunities arising from the removal of milk quotas.

Methodology

Two-hundred and forty six dairy farmers responded to a survey made available via Agriland, Ireland's largest farming news portal. The survey was published almost one year after the removal of milk quotas and it captures participants' self-reported expansion since the end of the quota era as well as their production plans for the next three years. Participants responded to an 18-item regulatory focus questionnaire that framed regulatory focus in an agricultural context.

Outcomes and Findings

Promotion focus plays a significant role in production planning in agriculture. The main contribution of this article is to show that dispositional approach motivation (i.e. promotion focus) by farmers, such as idealising how they see their farm in the future, may significantly affect farmers' judgement about potential risks and influence their choice of expansion strategy. Freed from the constraints of production quotas, the choices made by farmers in undertaking production changes incur a specific set of economic and operational risks on the farming enterprise. Results indicate that promotion focus is an important dispositional form of motivation driving expansion strategies that present greater risk to the farming enterprise through lower financial and operational flexibility. This study has relevance for policymakers tasked with designing and implementing agricultural and environmental policy that is considering changes to production constraints in agriculture. The results found here resonate with the observation by Schultz and Brownlee that 'the elements which affect yields and their change are discernible and better understood by farmers than is the behavior of prices' (Schultz and Brownlee, 1942, p. 496). Farmers with a strong promotion focus may not be sufficiently analysing and considering the risks related to milk prices as they form plans. This dispositional promotion motivation is also likely to influence participation in risk management tools. Furthermore, the design and communication of these tools must take account of the farmers chronic dispositions.

Reference

Schultz TW and Brownlee OH, 1942, *Two Trials to Determine Expectation Models Applicable to Agriculture* *The Quarterly Journal of Economics* Vol. 56, No. 3 pp. 487-496

The underlying study was published in the Wiley Online Library

<https://onlinelibrary.wiley.com/doi/full/10.1111/risa.13254>

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