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## **Executive Summaries**

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### **RESEARCH**

#### **New Product Development in Thai Agro-Industry: Explaining the Rates of Innovation and Success in Innovation**

*Pisit Dhamvithee, Bhavani Shankar, Anuvat Jangchud and Phaisarn Wuttijumnong*

The Thai food industry is amongst the most dynamic and diverse in the world, and the sector contributes significantly to Thailand's growth and prosperity. Continual innovation in the form of new product development is critical to this industry, and yet new products are more likely to fail than succeed. In this paper, we investigate factors explaining both the rate of new product development as well as the rate of success in products newly introduced into the market.

The data is derived from a survey of Thai food manufacturers, incorporating information on counts of new products, success rates and a range of variables capturing basic firm level information as well as likert scale responses on new product development practices and company competencies. The methodology involves a Poisson regression to explain the counts of new products in a year, and a least squares regression to explain the proportions of such products that succeed.

The rate of innovation is found to be strongly sub-sector specific, and increasing in firm size. Interestingly, lack of competition is also found to encourage innovation, supporting a Schumpeterian hypothesis that increased competition hinders innovation. Success rates in innovation are found to be strongly dependent on the rate of innovation itself, and negatively so. This indicates that Thai food manufacturers utilize two different routes to successful innovation. Some release large numbers of new products but pay for it in the form of lowered success chances for individual products, while others restrict the numbers of new products developed, but succeed by increasing the chances of individual product success. Larger firms also enjoy more success in innovation.

#### **Policies and Measures for Multifunctional Agriculture: Experts' Insight**

*Kyösti Arovuori and Jukka Kola*

Multifunctionality of agriculture is with the growing importance in agricultural policies. The main argument behind multifunctionality is that agricultural

production and thus, the whole agricultural sector has multiple roles, not just to produce food and fiber, but also to provide several non-market commodities. Although agricultural policies in Europe set more and more emphasis on the importance of these non-commodity outputs it is hard to find policy measures designed directly for multifunctionality.

We used the applied policy Delphi method to find out expert's stated preferences on multifunctional agriculture and multifunctionality enhancing agricultural policy measures. Our respondents consisted of 24 experts involved in research, administration, political parties and interest groups and were selected on the basis of multifunctionality: We attempted to find expertise in every dimension of multifunctional agriculture, including agriculture, rural, environment, animal welfare and consumer issues.

Our results show that multifunctionality of agriculture is regarded as an important element for agricultural policies in the future. A wider role of agriculture is highly acknowledged among the experts. However, in its broadest definition, no undivided acceptance for the concept of multifunctionality was found. The policy measures part gives evidence that also the current policy measures included in the EU's Common Agricultural Policy have elements that improve multifunctionality, especially those in the agri-environmental support scheme. Yet, there is a need for targeted measures based on different national, regional and local agricultural conditions. More targeting incurs more transaction costs. Our experts were unfamiliar with policy-related transaction costs and, consequently, incapable of evaluating the costs of more targeted policy measures. In general, however, it is quite clear that targeted measures will be more efficient in achieving clearly defined policy objectives.

In order to fully benefit from and to enhance multifunctionality, wider co-operation between different sector policies and consequently, cooperation between all actors in the whole supply are needed. Environmental aspects of multifunctionality are more an issue in agri-environmental policies, rural viability and employment broadens the scope to rural policies and vice versa, while food safety and quality is more an issue for the whole supply chain. Moreover, there is a need for targeted measures based on different national, regional and local agricultural conditions. In addition, the implementation of these measures needs more cooperation between different sector policies as well as among the different operators in the whole supply chain.

## **Farmers of the Future: Market Segmentation and Buying Behavior**

*Michael Boehlje, Todd Doehring and Steve Sonka*

Dramatic structural changes are occurring in U.S. and world agriculture. Significant shifts are occurring in both numbers and types of farming operations, and the structural changes of the past are expected to continue if not accelerate. These changes have important implications for the customer base of input supply manufacturers, distributors, and retailers, and increasingly such organizations are

attempting to better understand their customer segments and develop marketing strategies to respond to future farmer buying behavior. A methodology and a model to assess current customer segments by size/type category and buying behavior characteristics is developed to more concisely define customer segments. The model is applied to the US farm sector using a combination of Census, ARMS and CAB data. The simulation model encompasses transition drivers that allow analysis of various scenarios concerning future market segments in terms of both acres and farm numbers. The results illustrate the profound differences in segmentation by number of farms compared to acres impacted; the changes in acres over time by customer segment are much more dramatic than that in farm numbers.

## **CASES**

### ***Veggies 4U's Energy Pricing Dilemma***

*Francesco Braga*

*Veggies 4U* is a young and dynamic family-run greenhouse: Lucy and her husband run the business with the help of a small group of friends and colleagues who serve on the company's Board of Directors. Lucy is preparing a report to the Board to recommend a natural gas supply contract for the next three years. The company has received four different contract offers, ranging from a simple forward contract, to a maximum cost contract with a price floor. The case focuses on the pricing and risk management opportunities offered by an integrated North American natural gas market. Lucy has to assess the different supply contract offers received by the company and to reverse engineer them in order to benchmark their cost with that of potential synthetic alternatives *Veggies 4U* could build. Once Lucy has decided what to recommend, she has to sell it to the Board.

The case is ideal for teaching the practical aspects of reverse engineering complex contracts in order to benchmark them to exchange-traded, liquid market prices. Whereas the commodity is natural gas in the North American market, the applicability of the case is global. The case also challenges the students to prepare a simple explanation of their results to be used to "educate" a professional Board without specific financial engineering knowledge.

The case has been used primarily in fourth year undergraduate and MBA classes. The instructor enjoys a significant degree of flexibility and can focus the class discussion on a number of specific aspects; by the same token the case is scalable, as it can be used as a traditional teaching case based on the reverse engineering of existing offers, or to support a longer project which, *mutata mutandis*, could include current technical and fundamental analysis as well as financial engineering to help students design the preferred natural gas pricing strategy for this company.

## **Research Case**

### **Managing Labor on Dairy Farms: A Resource-Based Perspective with Evidence from Case Studies**

*Amin W. Muger and Vera Bitsch*

During the past decade, changing farm structures resulted in fewer farms and larger farm sizes, particularly in the dairy industry. With increasing farm size, attracting, motivating, and retaining labor has become a key challenge to managers. This study explores whether managers can use their human resources as a basis for competitive advantage and identifies management practices that enhance performance of the workforce.

Case studies of six dairy farms based on interviews with managers, herdsmen, and non-supervisory employees provide examples for a discussion of effective labor management practices against the backdrop of the resource-based theory. This theory treats human resources, similar to other resources, as a means to achieve competitive advantage relying on the internal strengths of an operation. With a consistent and adequate human resource management system, employees' knowledge, skills, and experiences will contribute to overall performance capitalizing on their abilities.

Recruiting networks, personal relationships between coworkers, trust-based relationships between managers and employees, training programs, task routines, and compensation packages differ across cases and, hence, can be the basis for differentiating strategies to establish a competitive advantage. A prerequisite of realizing superior performance is a clearly stated mission to guide employees in day-to-day operations and help them decide where to put emphasis. Explicit goals also provide focus to employees' efforts toward reducing costs and increasing revenues.