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Executive Summaries

RESEARCH

The Japanese Market for Imported Fruit Juices

Shiferaw T. Feleke and Richard L. Kilmer

Japan deregulated imports of fruit juices in early 1990s. Since then, the import penetration ratio (i.e. the fraction of income spent on imports or the increase in the extent of consumption of imports) of processed fruits into Japan has increased (JETRO). The deregulation of the fruit juice imports in the 1990s combined with rising income level have created an opportunity for the world's largest producers of fruit juice to expand their exports and raise market share. A fundamental understanding of the competition for market share involves market structure analysis (MSA) which explains the nature and extent of competition or the extent to which products are substitutes or complements. The identification of market structure is useful for assessing strategic opportunities, developing marketing programs, and assessing market share to evaluate performance (Vilcassim, 1989). The study was aimed at assessing the competition among major exporters of fruit juices into Japan and simulating the effect of the declining Japanese population growth rate on the demand for fruit juices. To this end, a differential consumer demand approach has been applied. Results indicate that most exporters can't increase market share through price reductions. Consequently, product promotion and product differentiation is a plausible option for most countries to stay competitive in Japan's fruit juice market. The demand for fruit juice in Japan will decrease over the period 2006 through 2020 for 11 of 18 fruit juice/country combinations because of negative population growth. Thus, the competition among countries in the Japanese fruit juice market will increase over time.

Implications of Trade Liberalization and Domestic Reforms on

EU Agricultural Markets *Ellen Huan-Niemi , Leena Kerkeläb, Heikki Lehtonen, and Jyrki Niemi*

The objective of this paper is to explore the overall effects of further trade liberalization and the implemented CAP reforms on EU agricultural production, EU imports and EU exports within different EU regions by using the Global Trade Analysis Project (GTAP) model. The GTAP model is used to compare a lower tariff reduction formula (EU Proposal) with a higher reduction formula (US Proposal) in order to show how sensitive the examined agricultural commodity/sector is to the different tariff reduction formulae.

This analysis reveals that EU imports would escalate and EU exports would plummet with declining EU production because of trade liberalization and domestic policy reforms in the EU agricultural markets and sectors. The most striking impact of a steeper tariff reduction formula

(US Proposal) is that the quantity of EU imports doubles compared to a milder tariff reduction formula (EU Proposal). Trade liberalization and domestic policy reforms will cause production declines in the old EU member countries for all the examined agricultural products, whereas the new EU member countries may encounter production growth in some of the examined agricultural products. Bovine meat products, dairy products, and sugar may encounter the most drastic decline in exports. Moreover, the imports of bovine meat products and sugar may grow to extremely high levels due to trade liberalization, especially if the tariffs are reduced under the US Proposal: Finland may be flooded by imports of these products. In order to protect the domestic production of these products, the EU may designate sugar, bovine meat products, and dairy products as sensitive products in the WTO. However, aggregates are deceptive because the GTAP model could not include products at the level of detail at which tariff lines are specified (for example at the 8-digit level). Consequently, the assessment of EU agricultural products that are sensitive to trade liberalization cannot be precise in this study.

Farmer Acceptance of Genetically Modified Seeds in Germany: Results of a Cluster *Amos Gyau, Julian Voss, Achim Spiller, and Ulrich Enneking*

The use of biotechnology in agriculture is of minimal importance in German agriculture compared to other countries like the United States. However, with the eminent introduction of the Genetically Modified (GM) corn in Germany and other European countries, discussion on plant genetic engineering has assumed an increasing momentum recently. The main objective of this paper is to contribute to this discourse by segmenting 370 German farm managers according to their attitudes and expected decisions on the use of the GM seeds.

Cluster analysis based on a technology acceptance model revealed five main farmer groups. The results indicate that the farmers do not differ in terms of their level of farm size and age. However, significant differences were observed in terms of the level of education, with the more educated farmers showing a higher propensity for the use of GM seeds compared to their counterparts who have a lower level of education. Furthermore, the clusters were found to differ in terms of the level of informedness on biotechnology, willingness to take risks, and general attitude towards the use of GM seeds.

We conclude that the use of effective and tailored communication, risk management activities, and education could be an effective strategy that can be used by the biotechnology industry and other interest groups to promote the use of GM seeds in Germany.

Assessing Consumer Preferences for Organically Grown Fresh Fruit and Vegetables in Eastern New Brunswick *Morteza Haghiri, Jill E. Hobbs and Meaghan L. McNamara*

Despite increases in the share of organic produce in North America, very little is known about consumer preferences toward the consumption of organic fresh fruit and vegetables in the Maritimes region of Canada. Previous studies have assessed a number of factors determining consumer preferences toward organic products, often with contradictory results across different regions and different products. Region and product-specific analyses are therefore of great value to agri-food managers. This study examines consumers' willingness-to-pay a premium to purchase organically grown fresh fruit and vegetables in eastern New Brunswick, Canada. Three important points can be highlighted from the results of this research. i) the effects of socio-

economic and demographic variables on consumers' willingness-to-pay suggest that distinct consumer segments for organic fresh produce can be identified within this region, ii) many consumers in eastern New Brunswick appear to have little or no knowledge about various practices of organic farming, such as integrated-pest management, and iii) when making food choices, consumers in eastern New Brunswick tend to prioritize their health over the environment.

Are Traditional Cooperatives an Endangered Species? About Shrinking Satisfaction, Involvement and Trust *Jerker Nilsson, Anna Kihlén, and Lennart Norell*

Several studies indicate that traditionally organized cooperatives have had and are having difficulties in today's markets, which are increasingly characterized by intense international competition. Some researchers who have studied this issue explain the development in terms of members' attitudes and behavior. With the traditional cooperative model's emphasis on unallocated equity, the members may easily feel alienated by increasingly large cooperatives with their more complex structures.

This study empirically tests these member attitude and behavioral hypotheses in a traditionally-based large and complex agricultural cooperative. A survey was conducted among members of a Swedish cooperative in the farm supply and crop marketing industry. The data were analyzed by structural equation modeling, a statistical method that reveals underlying interconnections among answer variables.

The findings indicate that the members perceive the cooperative to be so large and complex that they have difficulties understanding operations. This gives rise to dissatisfaction and low involvement, as well as mistrust of the leadership. Moreover, the members do not believe that the cooperative can be remodeled to strengthen member control. Thus, findings support the behavioral explanations presented in prior studies.

In spring 2009, after the data for this study was collected, the board of the cooperative under study introduced a number of measures, intended to reform the business away from the traditional cooperative model. Two new types of shares were introduced, both of which are freely tradable and appreciable. Mass media in the agricultural sector reported that members have a positive attitude toward the innovations. The experiences from the spring and the summer 2009 are, however, not as positive. The members have shown only little interest in the new shares and only few shares are traded on the market for these shares.

Toward Better Defining the Field of Agribusiness Management

Desmond Ng and John W. Siebert

Despite the growth and interest in the agribusiness profession, what constitutes agribusiness management research continues to be a perennial debate. As the field of agribusiness management has historically operated within the larger profession of agricultural economics, some view that agribusiness management is the application of economic principles to the study of the agribusiness firm. Yet, Harling's (1995) survey found that 70% surveyed viewed economics and management as distinctly different disciplines. In fact, "99% agreed that more than production and cost functions were needed to understand a business" (Harling, 1995, p. 506). Hence, Harling (1995), as well as French et al. (1993), have thus argued that in order to

advance agribusiness management as a discipline, there is a distinct need for managerial explanations of firm behavior.

This study argues that the advancement of a field is predicated on defining a field's set of fundamental questions or issues because resolution of such issues serves to elevate the field to a high level of inquiry. As a result, in order to advance the domain, and thus role of agribusiness management in agricultural economics, this study examines four questions of strategy and outlines the pertinent theories used in resolving such concerns. The relevance and implications of each of these various explanations to the study of the agribusiness firm are also discussed. We conclude with the contributions and implications of this study.

World Soybean Production: Area Harvested, Yield, and Long-Term Projections *Tadayoshi Masuda and Peter D. Goldsmith*

Soybeans (*Glycine max*) serve as one of the most valuable crops in the world, not only as an oil seed crop and feed for livestock and aquaculture, but also as a good source of protein for the human diet and as a biofuel feedstock. World soybean production increased 4.6% annually from 1961 to 2007 and reached average annual production of 218 million tons in 2005-07. Two thirds of the growth was due to land expansion and one third to yield increases. The contribution of yield growth to production growth declined since the 1990s and not kept up with soybean demand growth. This has resulted in a significant increase in the demand for land on which to grow soybeans.

A Box-Jenkins ARIMA type univariate time series model that is exponentially smoothed and includes a damped trend is used to forecast land use, yield, and overall production at the country and continent level. Results present significant expansion of soybean production in Latin America, especially Argentina. Three forecast scenarios highlight the interplay between land use and yield and the challenge of meeting a forecasted world soybean demand of 317 million metric tons on a limited land base in the year 2030. Soybean producers will need an additional 47 million hectares, a 50% increase, at current yield growth levels. Under a high yield growth scenario though, producers actually require less land to meet demand than is currently being used for soybean production. Greater investment germplasm and agronomic research and development to intensify production will raise soybeans yields in both high and low yield soybean countries. Such investment, sensitive to environmental impacts, will reduce conversion pressures on native biomes and limit the expansion of agricultural lands.

Do Private Labels Generate Loyalty? Empirical Evidence for German Frozen Pizza *Nadine Wettstein, Stephan Brosig, Thomas Glauben, Jon H. Hanf, and Jens-Peter Loy*

The increase of private labels in the food market and retailers' high expenditures for establishing them raise a central question: Do consumers really consider private labels as "real" brands and develop loyalty towards them?

A necessary condition of brand loyalty is repurchase behaviour. Thus, in this paper we analyse a four-year panel data set on the frozen pizza purchases of 14,000 households to study differences in consumers' repurchase behaviour between two strong national brands and private labels. Thereby, we include the dynamic aspect of repurchase behaviour, which is an important extension of previous models. Additionally, we consider household characteristics. This

facilitates a classification between specific household segments and the influence of their characteristics on repurchase behaviour. Our results show differences between national brand and private label buyers. Moreover, we find that the effects of several household characteristics on repurchase behaviour differ between national brands and private labels. This provides insights useful for a number of areas in marketing and product management. As defined in the marketing literature, brand loyalty is only one source of repurchase behaviour. Some researchers point out that it is also important to consider underlying attitudes. Thus, the definition of "true" brand loyalty includes both a behavioural and an attitudinal component. Subsequently, this attitudinal component needs to be tested. But it cannot be observed directly by using panel data. We think that analysing cross-buying effects or consumers' tolerance towards price increases could be possibilities for future research.

Trade-offs between Shopping Bags Made of Non-degradable Plastics and Other Materials, Using Latent Class Analysis: The Case of Tianjin, China

Catherine Chan-Halbrendt, Di Fang, and Fang Yang

Tianjin, China's fifth largest city has severe environmental problems. One cause is the high prevalence of plastic bag usage. This is a problem occurring in China's other major cities as well. To curtail plastic bag consumption, a law requiring large retail stores in China to charge for bags was enacted on June 1, 2008. As a result, many plastic bag-manufacturing plants were closed. However, because of the wide spread usage of plastic bags, they are still being manufactured and consumed. The premise of this study is that the current cost of plastic bags, at 0.3 CNY, is too low to change customer's consumption behavior. The purpose of this study is to explore the attitude of people regarding the substitution of plastic bags with bags made from alternative materials, and their willingness to pay for such substitutes. This study used a conjoint choice experiment to measure Tianjin residents' preferences for degradable and non-plastic materials bags. The results show that most people do not like non-degradable plastic bags and would use bags made of other materials if they were sold at a reasonable price. Based on the latent class and socio-demographic segmentation results, there are material and price preference distinctions among age groups. Also, there are niche markets for paper, cloth, and degradable plastic bags where costs are of a lesser concern in consumer decisions. Bag manufacturers should capitalize on the market information provided in this study to maximize their revenues. Specifically, the age factor has a large influence on consumer preferences for the type of shopping bags. As a producer and marketer of bags, it might be a good strategy to discover where the different age groups shop. Large modern shopping malls are often frequented by the younger generations, which clearly prefer biodegradable plastics, according to this study. For a majority of the respondents cost was negatively correlated, as was expected, so it is crucial for bag manufacturers, which produce for large markets to be cost conscious. Although, from the study's results, some consumers are willing to pay more if the bags are made from environmentally friendly material.

CASE

Strategic Decision Making Under Uncertainty: Innovation and New Technology Introduction during Volatile Times

Michael Boehlje and Maud Roucan-Kane

This case study outlines the strategic, marketing, and organizational issues facing the farm machinery and equipment division of Deere and Company as it tries to continue to grow. Deere Ag Division is considering the development of products in the information domain, which encompasses many opportunities of breakthroughs or disruptive innovations to market to new or underserved customers. While these disruptive innovations face uncertainties and challenges (capabilities and capacities that may be beyond Deere's current skill set, a more intimate knowledge of potential new customers, which may not be the focal point of the current sales/marketing initiatives), they can also, if successful, generate more profits. Since these disruptive innovations do not compete with current Deere products (in many cases they are add-ons to existing products), they can also attract new customers and generate new sales.

Instructors can use this case to discuss uncertainties and tools to mitigate risk. Readers must think strategically about innovation and the uncertainties associated with each innovation project. Beyond a listing of uncertainties, readers are also challenged to think about ways to mitigate risk through the use of real options, an options portfolio, and organizational structure.