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Dairy Markets in Asia: An Overview of Recent Findings and Implications

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Executive Summary

This paper is an overview of important findings regarding the ongoing evolution of Asian dairy markets based on a series of new economic investigations. These investigations provide systematic empirical foundations for assessing Asian dairy markets with their new consumption patterns, changing industries, and trade prospects under different domestic and trade policy regimes. The findings are drawn from four case studies (China, India, Japan, and Korea), as well as a prospective analysis of future regional patterns of consumption and a policy analysis of trade liberalization of Asian dairy markets. The overview distills the findings of these new investigations and integrates them in the earlier economic literature; it draws policy implications and identifies lessons for countries outside of Asia, especially for emerging exporters in Latin America.

Keywords: Asia, China, dairy, India, Japan, Korea, liberalization, trade integration.

DAIRY MARKETS IN ASIA: AN OVERVIEW OF RECENT FINDINGS AND IMPLICATIONS

A special issue of the journal *Food Policy*¹ builds systematic empirical foundations for assessing Asian dairy markets, with their new consumption patterns, changing industries, and trade prospects under different domestic and trade policy regimes. The issue presents case studies of China (Fuller et al., 2005), India (Rakotoarisoa and Gulati, 2005), Japan (Schluep Campo and Beghin, 2005), and Korea (Lee, Sumner, and Ahn, 2005), and two other papers that look at recent and future regional patterns of consumption (Dong, 2005) and integration of Asian dairy markets in world markets through trade policy reforms (Peng and Cox, 2005). In this briefing paper I distill the findings of these investigations and integrate them with the existing economic literature,² drawing policy implications and identifying lessons for countries outside of Asia.

Market Distortions and Their Impact

Dairy markets are among the most distorted worldwide, especially among Organization for Economic Cooperation and Development (OECD) countries. Japan and Korea, the Asian members of the OECD, typify these highly distorted markets, which have a complex system of international trade barriers (tariffs, tariff rate quotas) and domestic support (Lee, Sumner, and Ahn, 2005; Peng and Cox, 2005; and Schluep Campo and Beghin, 2005). Trade barriers provide the bulk of the protection and support for Asian dairy industries. Domestic programs are often redundant given existing trade barriers, and they have a limited influence on world markets and trade (Peng and Cox, 2005). This is consistent with general patterns of distortions in other markets and other regions (Aksoy and Beghin, 2004; Cox and Zhu, 2004; and Hoekman, Ng, and Olarreaga, 2004). In developing Asia, the protection structure has been historically high (Kehren and Tisdell, 1998; Riethmuller et al., 1999; and Erwidodo and Trewin, 1996). More recently, this protection structure has become more heterogeneous and in flux, with a downward trend

because of various causes. Indonesia removed the bulk of its trade barriers on dairy products in 1998/99 through structural adjustment policies (Barichello, 2005; and Fabiosa, 2005). In the last 20 years, India has progressively decreased the support and protection of its dairy producers unilaterally, although commitments under the Doha round have helped as well (Rakotoarisoa and Gulati, 2005). Finally, China, with its membership to the World Trade Organization (WTO), has also lowered its tariffs on dairy products (Fuller et al., 2005). Other Asian countries that are members of the WTO have had to decrease their border protection. Nevertheless, many countries in Asia and in the rest of the world have kept some significant barriers to dairy trade. Further trade opening and integration are warranted.

Based on recent aggregate trade patterns and their likely future, Asia is and will remain a large net importer of dairy products (Dong, 2005; Podbury et al., 1995; Rae, 1997; and Rutherford, 1999). Many Asian countries suffer from one or more factors hindering their competitiveness in dairy trade (tropical climate, land and feed scarcity, labor cost, transaction/transportation costs). These handicaps explain their net dependence on world dairy markets. This fact is likely to remain valid in the future even if Asia dairy production becomes much more productive (Dong, 2005). These aggregate patterns dissimulate various levels of competitiveness within the Asian continent. Countries' competitiveness levels are also conditioned by distortions affecting world market prices (Kehren and Tisdell, 1998; Peng and Cox, 2005; Podbury et al., 1995; and Rakotoarisoa and Gulati, 2005). Peng and Cox (2005), and Rakotoarisoa and Gulati (2005) find that India could be a competitive exporter under world prices that would prevail if Asia liberalized its dairy trade. India could experience significant exports of milk powder to Indonesia, Malaysia, the Philippines, and Thailand, which are large importers of that product.

Among Asian countries, Japan's trade impediments have the largest depressing effect on world market prices faced by Asian countries. Protection in other OECD markets outside of Asia (e.g., the European Union, Canada, and the United States) has a similar distorting effect. Further, if all countries liberalized their dairy markets, China as well as India would export to world markets with the higher world prices that would prevail under global free trade. India has a long tradition of dairy production. China also has a dairy tradition in pastoral regions, which is more of a rural market, and is continuing to evolve,

with influences from the modern segment of the industry. The competitiveness ranking found by Peng and Cox (2005) places India at the top, followed by China, other south Asia region (Afghanistan, Bangladesh, Bhutan, Maldives, Nepal, Pakistan, and Sri Lanka), South East Asia region (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam), Korea, and finally Japan.

Trade liberalization would help rationalize domestic dairy production in many countries but would not wipe them out entirely. Domestic use of fluid milk depends on domestic milk production, for which natural protection is high because of transportation cost (Lee, Sumner, and Ahn, 2005). Examining trade liberalization in dairy markets reveals a potential wave of structural changes on the supply side because of the high levels of protection prevailing in dairy product markets in many Asian countries. The process of market integration and emergence of a modern dairy industry is dynamic, with competing “supply models,” which may not all survive as suggested by the case of China. In addition to trade barriers, the current organization and incentive structure in many countries provides limited rewards for improving quality. For example, milk quality and sanitation remain major problems in Indonesia because of a rigid cooperative structure and lack of basic traceability of milk quality for individual producers.

With regional or global trade liberalization, average prices paid for dairy products would fall in Asia (Peng and Cox, 2005). Asian consumers in high-tariff countries would benefit from liberalized regional trade through lower prices for dairy products, except in India and to a lesser extent in China. In the latter countries, prices are likely to increase with world or regional trade liberalization and associated higher world prices. As Asian demand for dairy is not price responsive, the lower consumer prices would translate into welfare gains for consumers rather than a substantial expansion of consumption. Quality and product choices improve with trade integration, as shown in China, India, and many other countries. These improvements also translate into welfare gains for Asian dairy consumers.

Dynamic Markets

Despite trade barriers, Asian dairy markets are dynamic both on the supply and demand sides (Cox and Zhu, 2004; Nin Pratt, Staal, and Jabbar, 2005) and have much growth

potential. Innovations in food processing and structural changes in industrial organization also contribute to the sector's dynamism, as documented by Fuller et al. (2005) for China, with new value-added opportunities such as dry whey and lactose, for which trade barriers are low. Innovations have also expanded trade opportunities for traditional milk products such as milk powder and butter-oil, which are transformed into final products after importation to circumvent protection on finished products (Cox and Zhu, 2004). Concentration in processing and vertical integration are emerging in several Asian markets and are important sources of economies in procurement, processing, and logistics and lead to significant levels of foreign direct investment. The latter is conditioned by countries' macroeconomic policies, political stability, and investment climate. China is the best example of these supply dynamics, with its double-digit production growth rate and improving production techniques, processing technology, and marketing arrangements.

These changes in dairy industries have been fostered by a transformation of food retailing, with large retailers creating a new interface between producers and consumers. They have become a driving force in several Asian countries such as China and India, but this phenomenon is just starting in other countries such as Indonesia, although there the upper-middle income class in urban areas is leading dairy consumption growth (Barichello, 2005; and Fabiosa, 2005). These patterns confirm the conjecture of Reardon et al. (2003) on the spread of this new interface in many regions of the globe.

Asian dairy consumption, especially in developing Asia, has been expanding dramatically with income growth, changing demographics (population growth, urbanization), and the dietary changes in many (but not all) countries (Fuller et al., 2005; Pingali, 2004; Schluep Campo and Beghin, 2005; and Watanabe, Suzuki, and Kaiser, 1999). Income growth and demographic changes explain 60 percent or more of dairy consumption expansion in Asia (Dong, 2005).

Common Consumption Patterns

Global consumption patterns show that as income increases, the consumption of animal protein (fish, meat, and dairy) increases (Pingali, 2004; and Seale, Regmi, and Bernstein, 2003). Because many Asian economies have been growing rapidly, they fit these global consumption patterns. They have been experiencing a substantial increase in animal

protein consumption and in particular dairy, although starting from low levels. Asian consumer demand for dairy appears to be responsive to income rather than prices (Dong, 2005; Fabiosa, 2005; Fuller et al., 2005; Lee, Sumner, and Ahn, 2005; Podbury et al. 1995; Rae, 1997; Rutherford, 1999; Schlupe Campo and Beghin, 2005; Stroppiana, Riethmuller, and Kobayashi 1998; and Song and Sumner, 1999). Many Asian countries are also experiencing Westernization of their diets. The latter refers to an additional change in consumption patterns not explained by income growth but rather by urbanization and associated exposure and availability of new food items with high dairy content. The emergence of cheese consumption in Asia clearly follows the emerging Westernization of consumers' diets and the increased reliance on convenience food and eating out. Urbanization appears to be a key driver in the expansion of cheese consumption but it is a proxy for more specific vectors of changes, that is, large retailers and restaurant chains expanding the set of choices of consumers (Fabiosa, 2005; Fuller et al., 2005; Song and Sumner, 1999).

The investigations included in the special issue of *Food Policy* provide evidence of common patterns of dairy consumption among Asian countries but also show the limitations of a common-pattern paradigm for understanding Asian dairy markets. Few Asian cultures and diets use milk fat in their cuisine. India is a substantial counter-example to this tendency, although its milk fat consumption is still low by Western standards (Dong, 2005). In addition, many Asian consumers suffer from lactose intolerance. Hence, the consumption of fluid milk and milk fat in Asia is likely to remain lower than in other countries/regions with comparable income and demographic characteristics (Schlupe Campo and Beghin, 2005; and Dong, 2005).

Implications and Lessons for Other Countries

What are the lessons for dairy policy, especially for net importers of dairy products? The promotion of dairy production in Asia and elsewhere has often degenerated into protectionism. In Asian countries this has been done in the name of food security. Trade liberalization and the removal of domestic support tend to induce pro-competitive effects, which in turn improve product quality, variety, and competitiveness. These improvements were seen in Australia and Eastern Europe when they reformed their policies. There are effective ways to help Asian dairy industries emerge, if not flourish, without recourse to

blunt trade barriers penalizing users of dairy products. Policies specific to dairy industries could foster international technology transfer through better genetic stock and feed; promote human capital in dairy production regarding feed and sanitation, and lead to changes in the incentive structure for quality improvements. Dairy yields are low in developing Asia and the scope for improving these yields is real. Macroeconomic and trade policies are also important to ensure that foreign direct investment can be enticed and knowledge transfer can take place. Policies lowering transaction costs (transportation, refrigeration infrastructure) are also important and likely to benefit many industries besides dairy. Public funds are scarce and have to be spent wisely. Beyond these policy choices, most Asian countries will have to continue to rely on trade to meet domestic demand.

The literature noted that large retailers have facilitated the emergence of dairy markets. Their presence requires a critical mass of consumers with enough purchasing power to create a domestic market. Hence the poorest Asian countries will have to do without until they meet this condition. These implications for the emergence of dairy industries and markets are likely to be repeated outside of Asia. The existence of a dairy tradition reflects some source of comparative advantage and may ease some of the impediments faced by dairy producers, as is the case in India and China.

Another important question is which exporters are positioned to supply Asia. India has some potential for milk powder, especially in the context of WTO agricultural trade reforms. Australia, New Zealand, and several countries in Latin America (Argentina and, more recently, Chile and Brazil) will probably provide the bulk of the Asian import expansion. The European Union is likely to remove its dairy export subsidies at the conclusion of the Doha round, and this policy change will remove large dairy supplies from world markets. Chile and Argentina have emerging dairy industries mostly geared toward the export market; the available technology and comparative advantage based on cheap feed and weather have made this export capacity possible. Large food processors have been involved in these countries and have catalyzed the transformation of their food industries (Farina et al., 2005).

Endnotes

1. The special and forthcoming issue is entitled “Evolving Dairy Markets in Asia: Demand Growth, Supply Adjustments and Policy,” edited by John C Beghin.
2. Earlier investigations include, on Asian patterns: Podbury et al., 1995; Rae, 1997; and Rutherford, 1999; on Indonesia: Riethmuller et al., 1999 and Erwidodo and Trewin, 1996; and more recently Barichello, 2005; and Fabiosa, 2005; on Japan: Kawaguchi and Kaiser, 1997; Stroppiana, Riethmuller, and Kobayashi, 1998; and Watanabe, Suzuki, and Kaiser, 1999; on Korea: Song and Sumner, 1999; and on Thailand: Kehren and Tisdell, 1998. See Fuller et al., 2005, for a review of the literature on China, which is much more recent.

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