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Consequences of further opening of the Korean dairy market

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Abstract

This paper develops a simulation of Korean dairy policy that is tailored to the data, institutions, and policies in South Korea. It compares potential effects of changes in trade and domestic policy to baseline projections to 2015. Beverage milk continues to be supplied from domestic sources, implying imports compete in the manufacture of tradable products. We model manufactured dairy product supply, demand, and trade on a milk fat and non-fat-solid component basis reflecting product fungibility over the 10-year horizon used for our trade policy analysis. We find that if the domestic price support is removed with no change in trade policy, the market price of raw milk falls by about 2% and raw milk production declines by 4.5%. Under substantial tariff cuts of 30–40% with no effective change in domestic dairy policy, Korean fat and non-fat-solid prices fall by 7% and 11%, fat and non-fat-solid imports rise by 9% and 7% and Korea raw milk production falls by about 2% relative to the baseline. Prices of Korean farmer-owned dairy inputs, labor, and capital fall by about 1%.

Keywords: Dairy; Korea; Trade; Policy

Introduction

In recent decades, Korea has been a growing agricultural import market as its economy has expanded and its markets have opened somewhat. At the same time, many

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Korean agricultural tariffs remain high and tariff rate quotas restrict imports for many products. Dairy products are among those for which relatively high trade barriers remain.

This paper uses detailed information about domestic dairy policies and institutions, internal market developments, and trade policies in Korea to assess the likely effects of policy changes for Korean dairy products (Song and Sumner, 1999). Our model compares the future effects of trade policy changes to baseline projection under which Korean demand for dairy products continues to expand. We incorporate the important feature that use of fluid beverage milk will continue to be supplied by the domestic dairy industry. That means that imports compete with the domestic milk production in excess of fluid use that is available for manufacture of tradable products.

We model processed milk product supply, demand, and trade on milk component basis to reflect the fungibility of products in the 10-year horizon that is the focus of our trade policy analysis. More import access for imported dairy products implies lower prices for consumers and Korean producers, and lower government support implies lower producer prices and smaller production. We quantify the magnitude of these effects, and the implications for domestic production.

Background on the Korean dairy supply, demand, prices, and policy

Production and consumption

Dairy products were introduced into Korea as "western" foods in recent decades. The domestic dairy production industry began in earnest in 1962 when South Korea, under state sponsorship, imported dairy cows. The industry, which produced 48,000 tons of raw milk in 1970, has grown to produce 2.5 million tons of raw milk in 2002. The number of dairy cows increased rapidly until the early 1990s. Since then, increased output is due mainly to rapid increases in production per cow, which has grown by 2% per year and is now about 83% of the U.S. average. Herd size per farm has also grown rapidly from under 10 cows per farm in 1985 to 47 cows per farm in 2002.

With these changes, average cost of production has fallen by 30% in real terms since 1983. Feed costs comprise about 51% of total production costs, which is similar to other regions, such as California, with intensive concentrate-based rations. Imported feed accounts for about 70% of livestock feed in Korea, implying that the cost of imported feeds accounts for almost 36% of total costs.

Milk consumption in Korea has also shown rapid expansion. During the period 1975 through 2002, total consumption of dairy products increased by almost 20 times, from 162,000 tons to 3.06 million tons (in raw milk equivalent terms). Per capita consumption grew from 4.6 kg to 64.2 kg. Until the middle of the 1990s, more than 70% of total consumption was in fluid use, but by 2003, non-fluid use has increased to 50% of total consumption. Fluid milk consumption is supplied solely from domestic sources, while about one-half of non-fluid consumption is supplied from imports.

Pricing and marketing of raw milk

Dairy production is heavily supported by the Korean government. The producer support equivalent for Korean dairy was 68% in 2003 (OECD, 2004). Behind high tariffs