**Europe is running out of butter**

A sharp increase in global demand has caused the wholesale price of butter to nearly double in Europe. Consumers are paying more too: retail prices jumped nearly 20% in June over the previous year, according to data from Euromonitor. Federation des Entrepreneurs de la Boulangerie, an industry group that represents French bakers, has described the situation as a "major crisis." It is warning of a sharp increase in the price of croissants, tarts and brioches. "The price of butter, while certainly volatile, has never reached such a level before," the group said in a statement. "Butter shortages appear to be a real threat by the end of the year."

There are multiple factors behind the skyrocketing prices: Consumption of butter is booming thanks to higher demand from countries including China, and some customers are returning to the dairy product after doubts were raised over its links to heart disease. Meanwhile, production has dipped in Europe. Global butter consumption is rebounding after years of declines, when consumers ditched butter for margarine and other substitutes. Raphael Moreau, food analyst at Euromonitor, said that consumers are increasingly opting for ingredients seen as natural and less processed, including butter. Recent scientific studies have suggested that butter, which had been linked to heart disease and increased risk of death, might not be as unhealthy as previously thought. One such study, published in 2016, indicated that [butter actually has more of a neutral association](http://edition.cnn.com/2016/07/01/health/butter-health-study/index.html?iid=EL) with mortality. "Health concerns are increasingly moving away from fats towards sugars," said Moreau.

The average European ate 8.4 pounds of butter in 2015, the most recent year available, compared to 7.9 pounds in 2010. The average American consumed 5.6 pounds of butter in 2015, up from 4.9 pounds in 2010, according to the U.S. Department of Agriculture (USDA). At the same time, Chinese demand for foreign milk products is booming. The USDA predicts that Chinese milk imports are expected to jump by 38% this year, with almost all of it coming from the EU and New Zealand. USDA predicts that global butter consumption will grow an additional 3% this year.

The butter price collapse follows years of tumult in the continent's dairy industry. In 2014, Russia[slapped an embargo on European food](http://money.cnn.com/2015/08/12/news/economy/russia-western-food-embargo?iid=EL)products in retaliation for sanctions imposed over its annexation of Ukraine. Russia had accounted for 24% of EU butter exports. The result was dramatically lower prices. In many EU countries, milk was [cheaper than bottled water](http://money.cnn.com/2015/09/07/news/economy/europe-milk-prices-protest/index.html?iid=EL). The EU would go on to intervene in the market, but many dairy farmers went out of business. Over 1,000 stopped production in the U.K. alone, according to Moreau.

The next worry is a shortage of butter in Europe. Butter production slumped 5% in the year to May 2017. Meanwhile, butter stockpiles have plunged 98% in a year, according to the European Commission's Milk Observatory.

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Analyse the market for European butter for both the period 2014 and the period 2017. For 2014, what caused the ‘dramatically lower prices’? For 2017, how can the “skyrocketing prices” be explained?

Consider each of the following as part of your answer:

* Determinants of demand for butter
* Determinants of supply for butter
* A graph of changes in the butter market in 2014
* A graph of changes in the butter market in 2017
* The role of time in determining price elasticity of supply in the butter market.

*This Q was on Summer exam 2018 (worth 50% of the microeconomics side of the paper).*