

A Taste of Protectionism: Coca-Cola in the Classroom

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Trade restrictions typically cost students very little as a percent of their expenditures, so it is all too easy for them to conclude that economists' ideas about international trade are abstract and apply little to their daily lives. Conducting a Coca-Cola tasting in the classroom can help drive home how international trade policy affects them in a way that they will remember beyond the final exam.

Import quotas push the price of sugar (i.e., sucrose) in the U.S. far above the world market price. In 2006 the average world market price for raw sugar was 15.5 cents per pound, while in the U.S. the same pound of sugar cost 22.1 cents. Over the last 25 years the U.S. price of sugar has averaged more than double the world market price. As Figure 1 shows, a consistent gap between U.S. and world market prices has existed since 1960, and the trend has been particularly pronounced since 1982. Meanwhile, corn subsidies combined with the sugar quotas keep high fructose corn syrup prices in the U.S. consistently below the U.S. price of sugar.¹

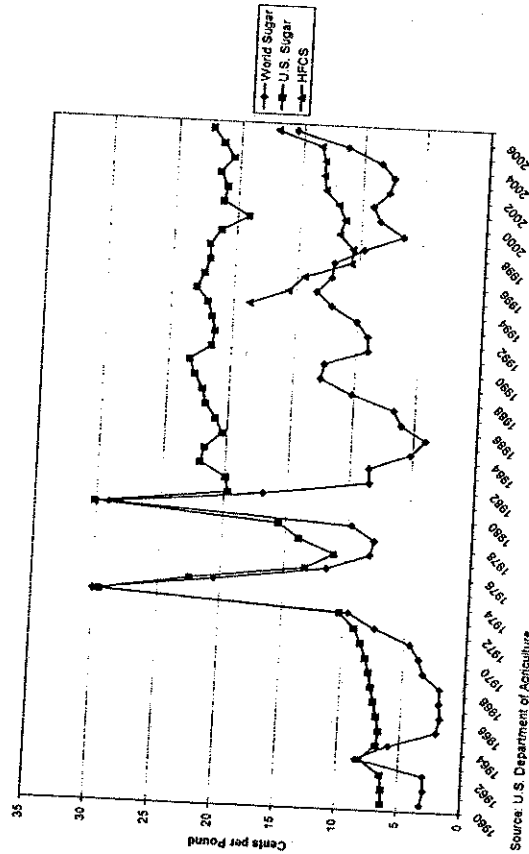
As a result of these price differentials, Coca-Cola alters its recipe in the U.S. Coca-Cola is made using sugar throughout the world but it is made with high fructose corn syrup in the U.S. The

* I thank two anonymous referees for helpful comments.

¹ All data in Figure 1 comes from the U.S. Department of Agriculture data tables available online at: <http://www.ers.usda.gov/briefing/sugar/data.htm>. Data is given for all available years.

result, in my palate's opinion, is that Coke tastes less "sharp" in the U.S., though not necessarily less sweet.² In any case, most students can easily identify a taste difference between international Coke and domestic Coke when they are tried side by side. Thus, a horizontal Coca-Cola tasting in the classroom can show a direct way that international trade policy affects their lives.³

Figure 1. Sugar and High Fructose Corn Syrup Prices



You can conduct an effective tasting in a variety of ways. I usually conduct the tasting shortly after a trip abroad so I can bring back the Cokes myself and tell a recent story about how I enjoyed the

² My students have had mixed opinions of whether one was sweeter than the other. I suppose a vertical tasting could reveal the same thing since Coke was once made with sugar in the U.S. High fructose corn syrup was perfected by Japanese scientists in the 1970s and introduced into U.S. soft drinks between 1975 and 1985. However, the exact date that it was put into Coca-Cola is not known with certainty, and there is speculation that both sugar and corn syrup were used together for a while. Because of this uncertainty and the fact that old bottles are hard to obtain, a horizontal tasting is preferable to a vertical tasting.

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different taste while away and wanted to share it with them. However, you need not go abroad to conduct this exercise. Many neighborhood stores in areas with high concentrations of Mexican immigrants carry Cokes bottled in Mexico and imported to the U.S. against Coca-Cola company policy.⁴ Just check the bottle: If "Hecho en Mexico" is written on it, you have found an international Coke. Coke also bottles kosher Coke, made with sugar, during Passover, which tastes the same as international Coke. Although this third option is acceptable, the first two are clearly better because they involve an international dimension.

The tasting can be done either blind or while allowing the students to know which type of Coke is which. The only real necessity is that both domestic and international Coke are tasted side by side. If only international Coke is used, many students who are not avid Coke drinkers will not remember the precise taste of domestic Coke and thus will not be able to detect any difference. If the tasting is done blind, simply pour the Coke into Dixie cups from bottles wrapped in paper or pour the Coke before the students arrive for class. A blind tasting allows you to more accurately assess which type of Coke the students actually preferred. Casual empiricism suggests that students prefer what they are used to drinking. Thus, it is unsurprising that Cokes made with sugar in Mexico often find their way into neighborhoods populated by Mexican immigrants who grew up with that flavor. Whether you conduct a blind tasting or allow students to know which Coke is which prior to tasting, it is easiest if you use two different color cups to keep track of which Coke is which throughout the exercise.

Students mainly benefit from this exercise by coming away with a memorable demonstration of how trade policies directly affect their lives. But it also is an effective method to stress some secondary points about trade restrictions that students often miss. Trade

⁴ Terhune (2006) describes how the market for Mexican Coke in the U.S. operates against Coca-Cola company policy.

restrictions impact the range and composition of goods we have to choose from as well as the quantity imported and prices we pay. Measurement of the deadweight loss of trade restrictions often leaves this out.⁵ This exercise provides a clear example where the nature of our goods and the range we have to choose from is impacted because of protection.

Students often mistakenly think that trade restrictions are good for businesses but bad for consumers. Yet more than 50 percent of all imports to the U.S. are either raw materials or intermediate components (Irwin 2002: 11). This exercise reinforces the point that protection is good for particular businesses but bad for other businesses that use the protected product. In this case, the U.S. sugar industry benefits while sugar-using businesses such as Coca-Cola are harmed. This can lead into a discussion of the various reasons why trade restrictions do not lead to a net increase in the number of jobs.

I have conducted Coca-Cola tastings six times in my international economics course. Each time students have enjoyed the exercise. On multiple occasions when former students have heard that I traveled abroad for a conference, they have asked me if I brought back Coke for my class, so the exercise has obviously made a lasting impression on some students. Only about 15-20 minutes of class time is necessary to conduct the experiment, and monetary costs are minimal. The largest burden, unsurprisingly, is actually imposed by the U.S. government. Federal rules prohibit taking liquid aboard airplanes, so the Coke must be stored in your checked baggage. Thus far however, I have not had any problems with bottles or cans breaking in my baggage. Thus, dealing with the regulation only requires a little extra advance planning.

⁵ See Irwin (2002) p. 33 and Romer (1994) for discussions about how much larger deadweight losses could be if the range of goods available to consumers is decreased because of trade restrictions.

Overall, a Coca-Cola tasting seems to provide pedagogical benefits well worth the minimal cost and class time it consumes. I plan on using this exercise in my Principles of Economics courses as well as my International Economics courses in the future.

References

Irwin, Douglas. 2002. *Free Trade Under Fire*. Princeton, N.J.: Princeton University Press.

Romer, Paul 1994. "New Goods, Old Theory, and the Welfare Costs of Trade Restrictions." *Journal of Development Economics* 43: 5-38.

Tethune, Chad. 2006. "South of the Border: U.S. Thirst for Mexican Cola Poses Sticky Problem for Coke." *Wall Street Journal*, January 16. www.wsjclassroom.com/monday/mx_06jan16.pdf

U.S. Department of Agriculture. Sugar and Sweeteners: Data Tables. www.ers.usda.gov/briefing/sugar/data.htm Accessed April 13, 2007.