International Price Comparisons for Novel and Follow-on Drugs
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Are pharmaceutical price controls in Australia, Canada, France, Germany, and Japan responsible for pushing their drug prices below prices in the United States? The answer has implications for US trade policy negotiations, and for the debate about whether the US government should directly negotiate Medicare drug prices.

Countries that represent a small portion of overall drug spending have an incentive to pay low prices for a given drug, knowing that their share of drug spending is small enough not to adversely affect incentives for research and development. If, however, many countries use price controls, the aggregate harm for research incentives could be substantial. The US which accounts for 48% of global pharmaceutical sales [1], would probably harm research incentives if it used price controls, so the US might want to pressure other countries to pay more. Olson and Zeckhauser described the exploitation of the great by the small (referring to government military alliances) [2]. In 2003, FDA Commissioner Mark McClellan scolded other countries for using drug price controls to avoid paying their “fair share” and “slowing the process of drug development worldwide” [3].

On the other hand, drug manufacturers are not helpless when it comes to price controls. Both the buyer and seller have market power and can walk away from negotiations. Pharmaceutical companies have fewer drug launches and longer launch delays in countries with price controls [4,5]. Governments can walk away from negotiations and authorize generic drugs prior to patent expiration, as Thailand did in 2006 and Brazil did in 2007, citing national health emergencies [6].

Two recent studies provide evidence that drug prices for novel drugs are comparable across developed countries. Roughhead et al. compare Australian prices to several measures of US prices, including Average Sales Price, Average Wholesale Price, the Federal Supply Schedule, and the Big 4 Price [7]. Calfee et al. examine more countries (Australia, Canada, France, Germany, and the United Kingdom), but use one measure of price from IMSHealth MIDAS data [8]. Calfee et al. omit rebates but point to a Health and Human Services report suggesting that rebates are small. For the novel drugs in question, this seems reasonable.

The two studies provide evidence that novel drugs are not more expensive in the United States, but what about less unique, i.e., follow-on drugs? Roughhead et al. do not analyze such drugs [7]. Calfee et al. find that less-unique drugs are relatively more expensive in the United States [8], but the authors use price data that do not include rebates which might be important in the follow-on market. When drugs face branded competition, they rarely lower their list price, but instead offer greater rebates to
payers. Health insurers are able to extract rebates from manufactures of follow-on drugs in exchange for preferable formulary status. Demand is sensitive to relative copayment, so drug manufacturers should be willing to pay high rebates to have low insurance copayments relative to rivals [9].

It would be interesting to combine the Roughhead et al. [7] data (Average Sales Price, which includes rebates, and other US price data) with the Calfee et al. [8] data (international prices for follow-on drugs in multiple countries). Average Sales Price data have rarely been used in research to date, probably because the data are only available beginning with 2005 and because the data are not available for all drugs. Nevertheless, several drugs with relatively close substitutes appear in both ASP data and the Calfee et al. data including azithromycin, ondansetron, and sumatriptan [8,10].

Of course, finding that prices outside the United States are lower does not necessarily mean that price controls are responsible. Prices outside the United States might be lower because of demand-side differences such as lower average incomes and lower average prices for medical substitutes, such as surgery. On the other hand, price controls can be pernicious, especially when based on low prices in poor countries. When rich countries base their prices on average or minimum prices in poorer countries, they create incentives for drug manufacturers to raise prices in poor countries [11,12].

This commentary began by describing a difference between large and small markets: large markets cannot use price controls without the risk of substantially harming incentives for research and development. On the other hand, there are advantages for large markets that appear after patent expiration. In large markets, more generic firms enter, and greater competition drives down generic prices [13]. Generic pharmaceuticals tend to be cheaper in the United States than the rest of the world [14]. Hence, we have evidence that novel drugs and generic drugs are as cheap or cheaper in the United States than in other developed countries. It would be interesting to know more about the variation in global prices for follow-on branded drugs, after accounting for rebates paid to US insurers. Additional research would be valuable for international trade policy and US government procurement of pharmaceuticals.

**References**

1 IMS Health. Global pharmaceutical sales by region, 2006. Available from:  
   http://www.imshealth.com/ims/portal/front/articleC/0,2777,6599_80528184_80528215,00.html [Accessed June 8, 2007].


3 McClellan M. Remarks before the First International Colloquium on Generic Medicine. Cancun, Mexico, September 25, 2003. Available from:  


7 Roughead EE, Lopert R, Sansom LN. Prices for innovative pharmaceutical products that provide health gain: a comparison between Australia and USA. Value Health 2007; doi: 10.1111/j.1524-4733.2007.00206.x.


13 Grabowski HG, Ridley DB, Schulman KA. Entry and competition in generic biologicals. Managerial and Decision Economics (in press).