

High drug prices in Canada are just one side of a bad equation

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The Canadian health-care system is under pressure as service levels decline while costs escalate. Drugs are one of our largest health-care expenditures. A federal agency, the Patented Medicine Prices Review Board (PMPRB), is supposed to control drug prices for Canadians. However, the last year has been marked by upheavals which prevented the PMPRB from enacting a proposed series of reforms that would have saved Canadians billions of dollars. Innovative Medicines Canada (IMC), an advocacy group for the brand name pharmaceutical industry, lobbied extensively to quash these reforms. Its lobbying campaign was one of several key events which prompted parliamentary hearings and concerns over political interference with the activities of the PMPRB. The result of these upheavals is that Canadians do not currently have a fully functional body protecting their best interests around drug prices. However, drug prices are just one side of the equation. We must also look at pharmaceutical investment to understand the impact of the industry on the Canadian economy.

Pharma industry in Canada

Not surprisingly, IMC paints the contribution of its members in a positive light, recently publishing a press release highlighting Canada's research and development (R&D) pharmaceutical sector as "a key partner in economic resilience, recovery and growth." IMC used data from Statistics Canada to show how pharmaceutical investment in Canada compares to other countries. Reports in news media and scientific publications, including one by one of us, have expressed concerns about the data used and the degree of influence that IMC had over the published Statistics Canada report. Other sources such as the PMPRB annual report, which includes pharmaceutical market statistics from the Organization for Economic Co-operation and Development (OECD), cite lower numbers for the economic impact of the industry. However, disputes over absolute numbers do not need to be resolved,

because the relative numbers can help us understand how the economic benefits to Canada from the pharmaceutical sector compare with peer countries.

High drug prices in Canada

Depending on the source, patented medicine prices in Canada are either fourth- or third-highest in the OECD (surpassed only by Germany, Switzerland and the United States), averaging 18 per cent above the OECD average. Some authors suggest our small market and fragmented administration of health care by 13 different provinces and territories contribute to high drug prices. However, when comparing the ratio of Canadian drug prices

with those of smaller countries like Australia (price ratio 0.71 compared to Canada), and the Netherlands (price ratio 0.77 compared to Canada), it is clear that small market size does not automatically mean high drug prices. Other countries with publicly funded health-care systems also have better prices, including the United Kingdom (price ratio 0.87).

Pharmaceutical sales data from 2020 shows that Canada spent US\$723 per person per year on drugs, which is much higher than countries like Australia (US\$447) and the Netherlands (US\$368). It is clear that Canada has very high drug prices relative to its peers — but what about the other side of the equation?

Pharmaceutical investment and the Canadian economy

Pharmaceutical trade balance is one indicator of the economic impact of the industry. Data from the industry itself shows the trade balance is positive for the European Union (EU) (US\$429.62 per person) and also positive for individual countries with higher drug prices like Germany and Switzerland. Contrast this with the negative pharmaceutical trade balance in Canada, where the deficit was estimated at US\$351.14 per person and increasing.

Canada fares better when looking at pharmaceutical employment. Its own statistics suggest the pharma industry provides one job for every 628 people in the EU overall. Looking at specific countries, it is not surprising that Switzerland has the highest level of pharmaceutical employment (one job for 185 people) but Germany (one job for 720 people) and France (one job for 682 people) also benefit. Although IMC touts a figure of 107,000 Canadian jobs, a look at the source from Statistics Canada shows that this includes both direct and indirect jobs. Still, the 49,403 direct jobs provided to Canadians by the pharmaceutical sector translates into one job for 774 people which is comparable with other countries.

Investment in pharma R&D in Canada

Not comparable however is the level of R&D investment. IMC cites a figure of CAD\$2.4 billion. However this figure differs from the source data, which actually provides an estimated range CAD\$1.8-2.4 billion, and includes spending by the entire industry, not just IMC members. The ratio of R&D to sales is another way to gauge the economic impact of the industry. The PMPRB noted that Canada had the worst ratio among comparator countries at 3.9 per cent. Countries with lower drug prices had ratios two to six times better than Canada (France 15.2 per cent, Italy 6.6 per cent, Sweden 25.6 per cent, United Kingdom 23.4 per cent), as did those with higher drug prices (Germany 20.9 per cent, United States 23.4 per cent, Switzerland 115.4 per cent). IMC disputes the PMPRB estimates claiming they are based on an outdated definition of R&D. But even using figures from the Statistics Canada publication endorsed by IMC, its membership was spending 5.6 per cent to 7.9 per cent of revenue on R&D, putting Canada perhaps marginally ahead of Italy but well behind the other comparator countries. Looking at both sides of the equation then, Canadians pay very high absolute drug prices and receive lower economic benefits relative to our peers.

Realistic goals for Canadian drug prices and pharma industry

Canada has traditionally been a resource-based economy. Enhancing other economic avenues takes time and consistent government policies. It is not reasonable to expect pharmaceutical investment in Canada sufficient to match R&D to sales ratios with countries like Switzerland where pharmaceuticals are a major contributor to GDP. However, Canada could try to achieve a balance of investment and prices closer to norms for similar countries. Using the median of the countries PMPRB uses as comparators, this would mean improving the ratio of R&D to sales by five-fold. Building on lessons learned from the pandemic, the federal government initiated a Biomanufacturing and Life Sciences Strategy to “rebuild our biomanufacturing sector, and support our innovative and world-leading scientists.”

To ensure that Canadians receive similar benefits from the pharmaceutical industry as other countries, we need oversight of both sides of the equation: drug prices (which requires a renewed PMPRB fully protected from political influence), and follow-up to ensure any government programs intended to offer investment incentives for the pharmaceutical industry in the Canadian economy achieve their goals.