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Toronto's biopharmaceutical cluster suffers from poor demand conditions. The problem? Government purchases squelch innovation

Bad health buys

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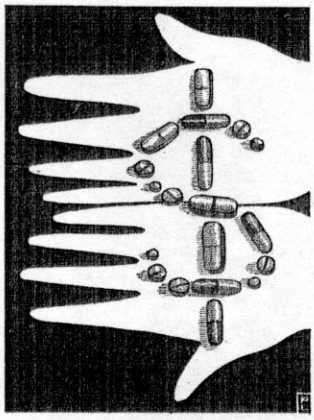

One of Ontario's significant assets is Toronto's biopharmaceutical cluster. The industry has excellent human and capital resources available to it and in employment terms it has become the eighth-largest in North America.

Nevertheless, the cluster represents untapped potential for Ontario's competitiveness and prosperity. Despite its impressive factor conditions, the cluster has not produced many world-leading companies, wages are well below levels achieved in comparable U.S. clusters, patent output is lower than its "fair share," and per capita research and development in the industry is well below levels achieved in many other developed countries.

To determine the cause of this untapped potential, we analyzed the Toronto biopharmaceutical cluster in comparison to Boston, one of the leading U.S. clusters. Our analysis concludes Toronto's cluster is negatively affected by the presence of dominant players in the purchasing decisions: the federal and provincial governments. With their significant impact on all buyers of biopharmaceuticals and focus on price, the government reduces opportunities for innovation in the cluster and indirectly prevents the development of a healthy supplier infrastructure that can provide the specialized support, for example in the area of venture financing.

As a result, Toronto suffers from unsophisticated weak-demand conditions. Here, the Toronto cluster is weakest. The region and the province suffer from demanding but unsophisticated customer conditions. The ideal environment features many buyers, whose patterns of demand anticipate world demand rather than copying it. Such buyers insist on innovation and upgrading from suppliers. However, the environment in the region is just the opposite. Sophisticated demand drives healthy competition, which in turn leads to innovation in products and processes while driving down costs – what analysts call a "positive sum game." However, health care competition in Canada is a zero-sum game where the participants divide value instead of creating it, because competition is focused primarily on containing costs. This restricts choice and access to services instead of making health care better and more efficient. For biopharmaceuticals, we find that the system is characterized by a single dominant buyer: the government itself. This dominant buyer restricts innovation and upgrading by:

- focusing on the price of biopharmaceutical products instead of fostering an innovatively competitive environment.
- limiting the reimbursement of new products in the marketplace.
- slowing down the introduction of new products.

We discuss each in turn.

Dominant buyer conditions focus on price. The prices for patented medicines are controlled federally by the Patented Medicine Prices Review Board (PMPRB). It uses international price benchmarking to regulate Canadian prices, in effect creating price ceilings. The Canadian price for new products cannot be more than the average price of the seven international peers. In 2003, Canadian prices for patented medicines were about 5% below the international median. This practice creates disincentives for Canadian-based pharmaceutical innovation by restricting funds available for future research and development.

In addition to federally regulated prices, provincial governments implement various polices that have an impact on price. If we use the example of the Ontario Ministry of Health, it dominates the purchasing of biopharmaceutical products in the province through its drug plans for the elderly and lower-income patients. Drug expenditures by the Ontario Ministry of Health account for 9% of its total expenditures. While the private sector (individuals, insurers and employers) accounts for the majority of drug sales in Canada, the public buyer, through regulation, controls the reimbursement price. For example, in Ontario a price freeze has been in effect since 1994. So even though many buyers exist – and they have every capability and incentive to be sophisticated buyers – one buyer dominates the process. And this buyer is focused on cost containment.

SOPHISTICATED DEMAND DRIVES HEALTHY COMPETITION

A dominant buyer approaching biopharmaceuticals as commodities means less value placed on different ways to treat the same ailment, higher or lower risks of potential side effects, or other ways consumers might differentiate between similar products.

On a per capita basis, Ontarians spend about three-quarters of their U.S. counterparts on drugs ($512 in Ontario v. $674 in the United States). While many applaud this, it represents a public policy choice. We have lower prices, but the lack of a sophisticated buying process means a less well developed cluster and reduced innovation and upgrading from our impressive factors conditions. The single dominant buyer in the process in Ontario differs from the process in the United States – one with multiple buyers who are both demanding and sophisticated as a result of the pressure placed upon them by the end consumer, who is more educated and has multiple choices of health care providers and a system that is less restrictive at the state level.

Dominant buyer conditions reduce availability of new products. Government procurement practices do not simply reduce price. To contain costs, government has implemented mechanisms to limit reimbursement of new drugs. Ontario has one of the most restrictive provincial drug formularies with only 35% of new drugs launched between 1997 and 2002 versus 59% of new drugs listed in Quebec, one of the least restrictive provinces. Further, a price freeze has been in effect since 1994, not only limiting industry revenue, but further affecting prices for new products brought to market. By limiting the number of new innovative treatments that are reimbursed, the government's silo mentality is in effect raising total health care expenditures by focusing solely on the price of the drug listed at the expense of the total cost of treatment per patient.

Dominant buyer conditions slow down availability of new products. Even for new drugs that are listed, provincial ministries are slow to list them. In Canada, new drugs face a two-stage approval process. Health Canada has one of the world's longest drug approval times. In 1998, the most recent year for which a full range of international comparisons is available, Canada had the slowest approval time among developed countries. Trends, since that time in comparison with the United States and Sweden, indicate that the situation has not improved – if anything, it has worsened. In 2001, average new chemical entities (NCE) approval time was 717 days versus 480 in the United States and 395 in Sweden.

In addition, it takes more than a year, a number that has been decreasing in more recent years, for new drugs to be approved for Ontario's formulary, which has an impact on all other sales in the province as other formularies and prescribing physicians often follow its lead. While other payers and prescribing physicians may have the ability to gain access to newer drugs, once approved by Health Canada, many take their lead from the Ontario formulary.

In summary, the biopharmaceutical cluster in Toronto and Ontario suffers from a very poor environment with respect to demand conditions. Pharmaceutical companies are not benefiting from the pressure created by sophisticated customers. The dominant buyer is so concerned about cost containment that its overwhelming motive is to keep the pressure on low prices. This is in contrast to U.S. suppliers of new products and services to their health care providers and payers. This environment has produced a powerhouse of innovative providers of pharmaceuticals and technologies, even though it has room for improvement.

With fundamental weaknesses at the level of demand, the support form related and supporting industries have not developed to the level observed in other regions.

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These comments are excerpted from Assessing the Strength of the Toronto Biopharmaceutical Cluster.
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