

QUALITY VS. QUANTITY

CANADIANS ARE GOOD AT CUTTING COSTS, BUT NOT SO GOOD AT MAKING CUTTING-EDGE PRODUCTS

By Daniel Trefler

ANY TIME NEARLY EVERY BANK ECONOMIST AND BUSINESS columnist in the country agrees on something, you should start asking questions. Right now, the near-universal view among them is that sagging productivity is pervasive in Canada's manufacturing sector. This has led to any number of crazy conclusions, including the idea that Canadians are lazy, overunionized, hiding behind an undervalued dollar and victims of free trade.

In fact, Canadian manufacturers are not uniformly trailing the United States in productivity growth. Most of the gap stems from just two industries—electrical and electronic products, and industrial and commercial machinery. Basically, the first is computers. The second, machinery, is the link between innovative activity and commercialized final products.

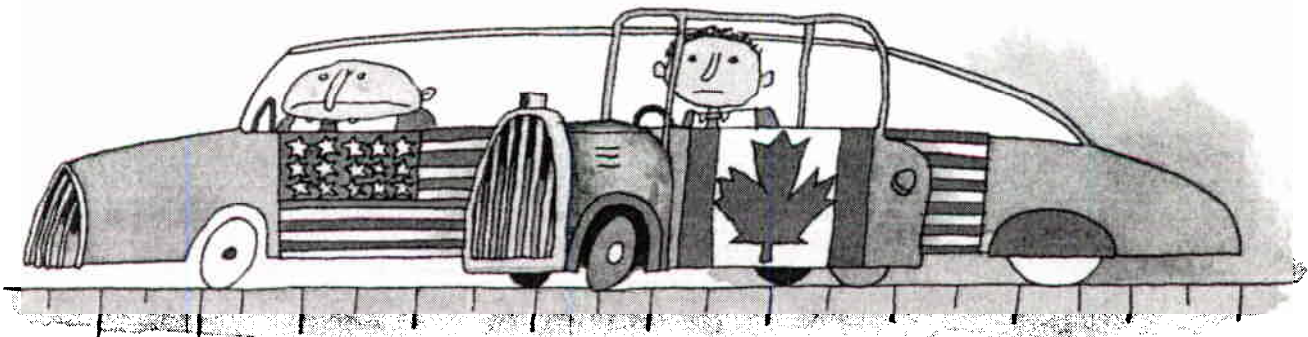
If there is a single message that should come out of this debate, it is that Canada's productivity gap is a product-innovation gap, not a process-innovation gap. Canadians know how to cut costs, but we are not particularly good at developing and marketing new products.

Computers and other high-end manufacturing industries are dependent on product innovation. Process innovation, by contrast, involves the reduction of the cost of producing existing products. Low-end industries such as clothing, furniture and leather products are oriented toward process innovation. Statistics Canada data on productivity growth between 1990 and 1995 show Canada leading the United States in low-end manufacturing, but trailing badly in computers and industrial machinery.

Why? The answer lies in the failure of Canadians to adopt and develop new technologies. A 1996 Statistics Canada study compared U.S. and Canadian technology adoption rates in five key industries: machinery, electronic and electrical equipment, transportation equipment, instruments and fabricated metal products. In 1989, the percentage of Canadian firms in those industries using advanced technologies such as computer-aided design and lasers was much lower than in the United States. Over the next four years, there had been little improvement.

As well, a 1994 Statistics Canada study measured factors that contribute to the success of small- and medium-sized enterprises. Labour skills and management skills were the least important. R&D capability and technological expertise ranked first and third in importance. Access to markets was the second-most important. That brings us back to the question of whether or not the Canada-

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U.S. free trade agreement (FTA) has helped or hurt productivity. This is my own area of expertise.

In a recent Industry Canada working paper, I examined more than 200 industries. It shows that industries which experienced the largest tariff cuts under the FTA also experienced the largest productivity gains. My statistical design factored out long-term industry trends, U.S. productivity trends and macroeconomic fluctuations. For industries that experienced average tariff cuts, the FTA raised productivity by 0.6% per year over the 1988-'95 period. For industries that experienced large tariff cuts, the FTA raised productivity by 1.5% per year. By and large, the low-end industries were the productivity winners, because they responded to the tariff cuts with cost-cutting process innovations.

What Canada needs next is more product innovation that will raise productivity in high-end manufacturing. Several policies could help promote this.

The cheapest is to continue to pursue preferential international trading arrangements with the innovative economies, such as Germany and Japan.

Then there is the thorny question of R&D subsidies. Canada's subsidies for large firms are among the most generous in the OECD. More thought must be given to subsidies for small firms. We must also recognize that we are rapidly losing our leading edge in basic research. It is a mistake to think that we can piggyback on U.S. research. Without the expertise here, the significance of U.S. scientific breakthroughs will not be understood until they have been commercialized by U.S. firms.

Patent protection is another thorny issue. The patent system walks a fine line between protecting innovators from imitators, while at the same time disclosing innovators' knowledge for others to build on. Both the protection and the disclosure encourage innovation. Unfortunately, firms are finding new legal avenues for suppressing the spread of knowledge and keeping it to themselves. Stopping firms from undermining the patent system involves changes to our legal code. But we must act now before we are forced into a corner by our World Trade Organization commitments to protect intellectual property.

R&D also has a human dimension, and the biggest fear in this area right now is of professionals fleeing to the United States. Proposed solutions usually involve tax breaks that would benefit a group of innovators that is much larger than those at risk of emigration. Such tax breaks are thus potentially very costly.

R&D subsidies, patent changes and tax cuts are also reactive policies. In the productivity debate, many of us have ignored the proactive lessons from research on the quality of life and population health. Thanks to the McCain-Mustard report on early childhood development, released in April, we are painfully aware of how early childhood experiences affect labour outcomes later in life. We also know that early interventions provide a big bang for the buck.

Canadians under age 25 are a productivity time bomb. Since peaking in the late 1970s, real earnings of males under 25 have declined by 30%. After adjusting for inflation, a freshly minted high school graduate in 1968 earned more than a freshly minted university graduate earns today. We are on a road that begins with reduced productive capacity for our youth and ends with a future productivity crunch for our country.

At present, the Chrétien government appears to be torn over whether to bring down a productivity budget or a budget for babies. The same high quality of life needed to keep skilled, innovative people in Canada will also help our children, our youth and our poor. We need productivity policies that toss out the bathwater of fiscal excess, but keep the baby. ●

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