

January 1986

## Should There Be More Canadian Government Intervention in Technology Transfer Arrangements between Canadian and Foreign Firms

Stuart Smith

Follow this and additional works at: <https://scholarlycommons.law.case.edu/cuslj>

 Part of the [Transnational Law Commons](#)

---

### Recommended Citation

Stuart Smith, *Should There Be More Canadian Government Intervention in Technology Transfer Arrangements between Canadian and Foreign Firms*, 11 Can.-U.S. L.J. 321 (1986)  
Available at: <https://scholarlycommons.law.case.edu/cuslj/vol11/iss/34>

This Speech is brought to you for free and open access by the Student Journals at Case Western Reserve University School of Law Scholarly Commons. It has been accepted for inclusion in Canada-United States Law Journal by an authorized administrator of Case Western Reserve University School of Law Scholarly Commons.

## Should There Be More Canadian Government Intervention In Technology Transfer Arrangements Between Canadian and Foreign Firms?\*\*\*

by Dr. Stuart Smith\*

**T**o the question of whether there should be more government intervention in the technology interchanges between Canada and other countries, my answer is a qualified yes, but only as part of a concerted national effort in certain strategic areas.

First, let me make a point that seems a bit off the topic. I was struck during this morning's discussion by the fact that we are trying to come to grips with a profound change. We are now at a stage where the latest knowledge in many fields has the greatest value. That was not always the case. It used to be that a new discovery or a new theory could easily be published. Other people then could look at it; and there was a long lag period before it became a matter of commercial value. Now, in some fields such as biotechnology, chemistry, and engineering, the latest knowledge is worth a tremendous amount of money. That portends great changes for universities. Either universities will become more secretive and commercial in themselves, more closely related to industry, or else industries will start their *own* universities in certain fields. That is a trend which we are going to see in the future.

Similarly, with respect to international agreements, discussions and trade, a trend has developed that we all dislike which was mentioned this morning, namely interference with the right to go to a conference or to give a paper. Unfortunately, I do not see any chance of that trend being reversed significantly. In some fields we have been ridiculously paranoid about it; but there is definite value in the latest information in certain fields, especially where wealth comes to be represented by intellectual property, rather than, for example, materials in the ground.

For Canadian nationalists, the question is always this: do we need a set of particular policies in order to assure the continued existence of a separate entity called Canada, with both the prosperity to afford and the means to implement a society similar to our American friends, but different in several important ways? Now, that is the question for nationalists. Obviously, for those who feel Canada is quite secure as a nation with no

---

\*\*\* Remarks given at Conference.

\* Visiting Professor, Health Sciences, McMaster University; Chairman of the Science Council of Canada (Ottawa) since 1982. Dr. Smith is a former leader of the Ontario Liberal Party and Member of the Ontario legislative.

problem of ever being otherwise, my concerns would be completely irrelevant. Although I respect other viewpoints, I remain concerned enough to analyze these questions.

In discussing this topic, it is only with the greatest reluctance that I propose measures to be taken by the government. There are very few who know better than I just how inefficient and politically motivated governments are and how poor they are at business. Government policies are, in my way of thinking, a poor, but essential substitute for what Canada really needs, but lacks: *an abundant supply of nationalistic capitalists, i.e. investors with national feeling.*

Due to our history and geography, we lack that supply; and even though that shortage might turn out to be fatal, some of us feel obliged to try to use government help, to finance, review, and regulate certain vital activities. Although I do not have a lot of confidence in the government to do this, I feel we must try to do better.

One wonders whether economists would have advised building a railway from east to west in our country. Economic logic certainly would have dictated improving and embellishing the links that ran north and south; that is where the markets, the tonnage, and the potential for growth were. Nationalism built the Canadian Pacific Railway, and nationalism brought in the much maligned tariff wall that went along with it.

We paid quite a high price for that, as we all know, but I think it is the price that we had to pay for a separate society. Canadians like that society. We have enormous admiration and great affection for our American friends, who are not only our neighbors, but often our relatives! We have that affection. Canada would not exist at all if it did not have such an understanding neighbor. No other powerful country in the history of the world would have permitted a rich storehouse of natural resources, such as Canada, to exist as a separate country. We have no doubts about that, but we do like our own society.

We choose to tax ourselves for universal medicare, and are willing to pay for translation and, extra systems with two official languages. We have a policy of multiculturalism. We place quite a premium on privacy and we have sensible gun control. We have a very low crime rate. We have freedom of religion, of political affiliation, but so far, at least, no real problems with fundamentalist crackpots or lunatic fringe political elements. Our country enjoys friendship and respect around the world. We do not kid ourselves. Much of what we like about Canada can be afforded because we are protected by the U.S. We do not have to shoulder the burden of leading the free world, and dealing with all of the divisive domestic issues that stem from that leadership role.

I think we have a right to be quietly proud of what we have done. The key word is *quietly*. I do not like nationalism very much and do not consider it a very high human virtue. What I like most about Canadian

nationalism is its mildness and its modesty, which I guess is its weakness and our national dilemma. The chief reason our nationalism is worth preserving is its mildness — the main reason why we might lose it. This poses a serious dilemma.

There are two ways that we can lose our independence. As resources command less in terms of trade, we can fall behind economically. New Zealand was the example that Carl Beigie gave. There is also Uruguay for instance, a country very similar to Canada in the Thirties; yet look where it is now. It can happen. But, as I say to my Australian friends, if that happens to them, which it might, since their economy is almost identical to ours, you too may have the “privilege” of poverty.

We will not have that “privilege.” If and when we start to get poor, our people will simply demand the right to move to the United States to enjoy a better standard of living. The United States probably would be happy to let in our best and most educated people; but ultimately, there would be a clamor from Canada to let everybody in. Sooner or later our identity would be of little value.

There would also be pressure derived from taking certain steps to avoid the impending poverty. If the only steps taken were those which integrate our economies more closely, then sooner or later we would become politically integrated. Little by little, we would have very few discretionary decisions to make in Ottawa. One would then be obliged to set up a mechanism for running this integrated economy and sooner or later shifting the focus of decision to Washington.

Now, I am going to put all of that aside. Simply put, my comments are premised on the belief that Canada’s future is not all that secure as an independent nation. I certainly do not say this because I think the U.S. has designs on us; however, if things go badly for Canada, we will have designs on the U.S.!

Returning to the matter of government intervention, I am not for intervention in the sense of substituting government action for decisions best made by people in the marketplace. Rather, I am for government intervening as a leader, thus taking a leadership role in a process which will lead to more players entering the marketplace. In turn, this will influence the players to make certain decisions, not completely against their better judgment, and which can be concerted in the national interest.

Experiences I have had while visiting other countries explain, in part, why I have concluded that it is possible to intervene without being heavy-handed. I have made a point of visiting the most rapidly growing economies in the world, countries that have been successful despite small size and natural resource reliance. These countries have managed to diversify their economies in ways that Canadians have not yet achieved.

In South Korea, for example, I was impressed by the miraculous rate of growth and told Koreans that a lot of Canadians would want to

invest there. They replied that, foreign capital would be welcome, but subject to the provision that companies must always remain under South Korean control. Joint ventures and technology licensing were deemed acceptable.

The Koreans merely were following in the tracks of the previous miracle economy, Japan. Japan grew with little foreign control, but considerable governmental support. I visited not long ago the Keidanren, the big business organization in Japan. They have dozens of subcommittees representing all Japanese business, but have virtually no foreign controlled companies on any important subcommittee. Japan grew with domestically controlled companies.

In Sweden, they managed to go from a forestry and iron mining economy to an engineering economy. I discussed with the Swedes how they did it and I asked about branch plants. I was told that in the Thirties, the Swedes were a little worried about foreign ownership of their economy, so the Wallenburg family, the bankers, called together the banking industry and said, "Look, our fatherland is in danger; there is too much foreign ownership and we will lose control." They set up a fund to repurchase Swedish assets. Perhaps that was easy because the offender was Germany and there was a depression. Even so, I have to smile, because when I think of the notion of Canadian banks getting together to discuss foreign ownership the result would, to say the least, be very different.

In Japan, there is a recent story which some of you may have seen. A bank was not happy about approving a loan that M.I.T.I. wanted them to give to a biotechnology company that had only a long-term payoff possibility. M.I.T.I. finally turned to the banker and said, "Are you implying that you think that your bank will last longer than Japan," and apparently that was sufficient to get the banker to approve the loan. The point is that other countries have taken different approaches towards foreign control. A country like Finland, for instance, is making very great progress with its own homegrown companies that receive considerable help from government. They target certain industries, like paper-making machinery and so on, and then they become export forces in those areas. The same thing happened with machinery in Sweden.

Even in the United States, which we all think of as the quintessential free market economy that doesn't do this type of thing, everyone gets into a panic about foreign takeovers here. There is concern expressed about even a very low foreign ownership percentage. Foreign controlled U.S. manufacturing amounts, I believe, to less than 5%, yet the Senate was up in arms about the possibility that United States industry was falling under foreign domination. In Canada, *half of our manufacturing sector is under foreign, mostly United States, control*. I'm not talking about joint ventures or licensing at arm's length or portfolio investments. I'm talking about *control*.

Since Canadians tend to control those elements of manufacturing

which are headed downward (i.e. textiles, furniture, etc.) it means that the advanced areas are more foreign dominated; 63% in the electrical products industry, 77% in the chemical products industry. These are realities that we have to live with in Canada and they are pretty serious. The American Congress wouldn't tolerate for a minute the notion of even 20% foreign control of any of these industries, and we are talking about 63% and 77% in Canada.

A previous Royal Commission about twenty years ago warned of the effects of this situation, but the remedies that they suggested were not found palatable by Canadians. The most recent Royal Commission mentioned it as well, but didn't dwell on it. They concentrated instead on some of the benefits of freer trade and freer markets, but I must say that it is very hard for me to discuss the economy without discussing foreign control, simply because it is so important.

Some very strange things have happened. For example, there are free-trade advisory committees on both sides of the border. The Americans decided only American-owned, American-controlled industries could be represented on these advisory committees, because they didn't want the head office of some company in another country to know what the American trade strategy was going to be. Canada thought that would be a great idea too, but found out there was nobody to be on the committee. In fact, they had no choice but to allow American-owned companies to advise the Canadian government on its free-trade strategy, subject only to a kind of honor code that they wouldn't tell the boss about it. I'm not saying that they should kick these people off of the committee, but I'm saying that it is a pretty interesting state of affairs when you have no choice in the matter.

How did all of this come about? It occurred because it was tacitly or overtly assumed by Canadian policy makers that we could prosper forever on the rents from our natural resources, with most of us working in the service sector, and the rest being employed in branch plants. The latter were suboptimal in size and, expensive in that sense, but we didn't need them for export as long as we had natural resources to earn foreign currency. Some economists didn't want the tariffs, because they felt they were inefficient, but they were not suggesting necessarily that we should set up our own manufacturing enterprises. In most instances, those were the very same people that said we should *import* manufactured goods and concentrate on sending out resources where we had "a comparative advantage." Until recently this was a very popular statement in economics. But now that you can *engineer* a comparative advantage, things are very different.

The concept of comparative advantage has changed into something a lot more flexible, and malleable. The old economic ideas are now obsolete, but there were and still are people who think we ought to just export resources and not worry about anything else. In fact, there are individuals in our western provinces who believe that very deeply.

Of course, in hindsight, it would have been better to use the tariff differently. It would have been better to use it to attract not branch plants, but joint ventures. Joint ventures would develop domestic capability in Canada that could then be aimed at a globally competitive market. This didn't happen because we didn't think we needed it. We were delighted to get the branch plants, because when they came in, they brought good technology and provided employment for Canadians. That was the tradeoff and I don't really blame anybody. It's just that, as somebody said about Great Britain, history has played a trick on Canada. It led us into a route which seemed reasonable at the time but which left us a residue of problems.

What about the future? The wealth of our economy is based on the export of bulk, low value-added commodities. Employment is largely provided by inefficient branch plants serving the domestic market and by our growing service sector. Now, if terms of trade are turning bad and modern technology intensive economics are the only ones open to high wage areas like our own, then higher value added export is the only possibility for us.

The problem then becomes how to jump from a branch plant low value-added economy to a research and technology intensive one which is oriented to world markets? It is tough enough for a country like the U.S., which is already the most advanced manufacturing country in the world, to make the jump to the very highest levels of technology. So how do we jump from the very bottom of the value-added heap to the very top? It is very, very tough and we are not going to make that transition easily.

We have to hope that our resources will carry us through the long transitional stage that is required. All the countries that are now successful in this regard are basing that success on homegrown firms. They use homegrown technology or technology imported from elsewhere, but on terms that allow further development and even export back into the countries from which the technology came in the first place.

What it all boils down to is people and what they become good at. The people who have experience in modern manufacturing in Canada usually lack experience in the research, development, design and international marketing of new advanced products, because they have not been permitted to perform those functions in the ordinary branch plant. The people we have in Canada who *do* know something about market development, planning, and international sales, are in the bulk commodity business, but they are struggling to survive. They don't know much about the high value-added economies. We lack that essential grouping of research intensive industries, experienced marketers and venturesome investors that is required for prosperity in the new era. We do have some venture capital in Canada, but at least 40% of that is now going to the United States! Perhaps one can now see the difficulties that we are up against.

There are two developments necessary to bring about change in Canada; they both relate to technology and intellectual property. First, we need homegrown technology intensive companies which will have to be helped to start up or to spin-off and will have to be assisted with technology development. They have to be aimed in niches at the world economy. Second, we need different mandates for the branch plants that now exist or might come into existence in the future, mandates that permit the growth of the expertise so desperately needed in Canada. Carl Beigie spoke about world product mandates and that is something the Science Council has been talking about for quite a long time, but has done very little about.

As to the first need, growing our own companies, there are indirect ways that the government can help create the right climate. There are also direct measures to support research, development and investment in technology and to assist the smaller companies. There are signs of life occurring, but our major fear is that the few small companies that manage to survive in this risky business and get to the point where they might be doing something that looks like it has growth potential will be very easy pickings for foreign takeovers.

These small companies go through very tough times, hitting their heads against the difficulties of our financial institution walls. When they finally get through the lean years and have something that is promising, somebody makes them a good offer. It's hard not to sell. Furthermore, it may even make a lot of sense to sell, because they might have a little niche product which will have a better chance to survive if it's in a company that has a much larger variety of products to offer on the world market. Our problem is that we need homegrown companies to grow from small to big, but we know that nine-tenths of the ones that we put research money into are going to go under anyhow. If we allow the few shoots that come up through our cold winter and show their heads, by some miracle, in the spring, to be cutoff before they are blooming and multiplying, then what hope do we have?

An amendment to the Investment Canada Act has been proposed which was drafted by Jim Spence. It would require review of a takeover to make sure it was the best possible circumstance for Canada. The review would be required *if* the company being taken over had received a certain amount of money from the federal government, in subsidies or grants, for research or development.

Now, to the second matter. How do you get branch plants to change their ways? It is happening already because the tariffs are dropping. The branch plants are doing one of three things. As pointed out in the Royal Commission Report, in the section edited by Professor McFetridge, the branch plants are either closing down, rationalizing, or going to world product mandates. There isn't much closing down, but the difference between rationalizing and the world product mandate is pretty

important. Certainly both of those options are better than ordinary branch plants, but they have far different implications.

In rationalizing, the multinational decides to assign to a particular branch some particular function or part; in that way they can achieve the economies of scale. That is certainly better than being what Carl Beigie calls a miniature branch plant serving only the domestic market. However, it still doesn't answer the need for people to become good at product development and design, originating a new product, taking it to market, improving it as the market feedback comes in, linking up external and internal research capacity, and so on. Those talents will come only when you have got a world product mandate or some genuine export potential that forces us into the international marketplace. Some multinationals are reorienting their companies this way. Others are not, but show willingness to talk about it. What the government has to do is talk with these people. Almost all the examples of actual product mandates that have become really meaningful have come about with some government participation. Either the government has had a big procurement contract to dangle or it has been willing to come in with a big grant to get something started. It is very rare, indeed, for genuine world product mandates to occur without a government carrot as part of the deal.

One of the best examples that we have is Pratt & Whitney Canada, an outstanding company which I'm very proud of as a Canadian, even though it is 100% owned by Americans. Even there, it was helped to get its original mandate by certain government constraints and incentives on a contract. Without using the strength the government has in its regulatory or procurement powers, research grants or other incentives, it is very difficult to get good world product mandate situations.

I think our tax laws and our government procurement and research help programs should favor world product mandates for domestically-owned firms over those whose hands are tied by a foreign head office. I'm not suggesting that we discriminate by ownership, but rather by behavior. In this way, change can be achieved. Some of this can be done by memoranda of understanding with different companies and a little of that's happening right now. I would like to see the government use the full array of levers available.

If all of this makes me an interventionist, I guess I'll have to accept the title. It is my view, and the view of my colleagues on the Science Council, that to give Canadians a fighting chance, some choices need to be made by our government; these are broad choices, strategic choices, and general directional choices. They should be made as a result of *consensus building* and an enormous amount of consultation, but they must occur.

The economy of the future is tied to intellectual property. Every country, including the United States is using government to help succeed in this race. Canada is poorly organized to accommodate this contest.

Like it or not, though, we need to use government to fill the gaps left by our investors, our industrial structure, our history, and our culture.

