THE NEW CASE FOR PROTECTIONISM

A group of economists argues persuasively that subsidies and import protection for high-tech industries might make sense because of the special role that R&D and experience play in those businesses. But it looks impossible to put their theory to practical use. ■ *by Sylvia Nasar*

PROTECTIONIST arguments rarely make sense. The costs to the nation as a whole almost always exceed benefits to the sheltered industries. So except for a few hired guns, economists generally espouse free trade. But now an intellectually respectable group of Young Turks is challenging the conventional wisdom. Their new theory applies to industries on the technology frontier, not the older ones like steel and textiles that cry loudest for relief from import competition. The new thinking is intriguing and has the force of logic. But as the Turks themselves admit, the leap from theory to practical policy is huge.

Consider the case that some of America's leading producers of computers, microchips, and telecommunications equipment make for so-called reciprocal, or fair, trade: Japanese and European governments give their high-tech companies an unfair edge by subsidizing research and development and capital investment and by protecting key markets from American imports. The subsidies reduce foreign companies' costs and enable them to engage in unfair price competition. The ultimate threat is a shrinking U.S. share of the world's high-tech trade. So some high-tech companies are asking for subsidies, tariffs, and other forms of intervention to create a "level playing field" until U.S. trading partners change their ways.

Most economists dismiss the case for protecting semiconductors as no sounder than the one for protecting steel or shoes. They argue that countries profit from free trade even when their trading partners adopt protectionist policies. As long as imports come cheaper than domestically produced substitutes—be they microchips or sandals—consumers gain more than producers lose.

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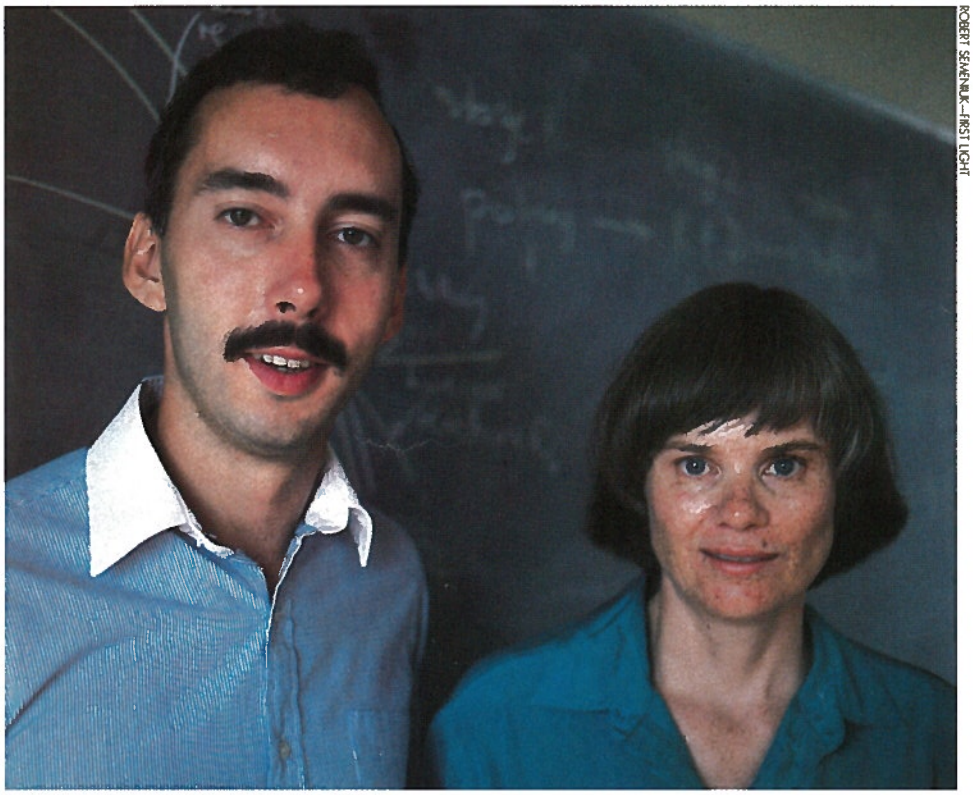

ROBERT SEAVEN/LIK—FIRST LIGHT

Two economists *at the University of British Columbia, James Brander and Barbara Spencer, helped pioneer the new trade theory but warn that protectionism is risky business.*

Whether foreign companies are selling below their costs is irrelevant. Foreign subsidies are gifts to American consumers. Some economists have quipped that a note of thanks, rather than retaliation, is the appropriate response to other countries' unfair trade practices. Says World Bank economist Michael Finger, "The only party with anything to complain about is the foreign consumer who pays for the export subsidy through higher taxes or domestic prices."

The new trade theorists argue that high tech is an exception to this rule. Their analysis shows that predatory trade practices may sometimes increase the national income of the country that adopts them and reduce the incomes of trading partners. Says Gene Grossman, an economist at Princeton University, "At least on a theoretical level, free trade may not always be best." At the very least, the Young Turks have provided a sound reason to worry about aggressive Japanese and European export strategies.

The new theory has won cautious accep-

tance by a number of experts on foreign trade. The dissidents' impeccable credentials smoothed the way for that acceptance. Most of them are on the faculties of leading universities, and they use strictly mainstream analytical techniques and publish in the most respected economic journals. "It's a palace coup, not a revolution," says Paul Krugman, professor of economics at MIT and one of the originators of the new ideas. But the chief reason for the new theory's quick inroads, says Avinash Dixit, another Princeton economist, is that its proponents had the field pretty much to themselves. Previously little theoretical work had been done on the economics of high-tech trade.

BILL BURKE—ARCHIVE

An MIT professor, *Paul Krugman, argues that high-tech industries are different because comparative advantage in them comes from R&D and the experience curve.*

Dixit, Krugman, and others focus on special characteristics of high-tech industries, namely the enormous costs for R&D and the need for long production runs to recoup those costs. While conventional theory holds that comparative advantages in trade come from differences between countries in resources and skills, the new theory emphasizes R&D spending, learning by doing, and economies of scale as sources of comparative advantage for modern industries.

This means it is no longer correct to think of a nation's comparative advantage as relatively fixed. "Trade increasingly rests on arbitrary or temporary advantages," says Krugman. Business strategy, government policy, and just plain luck can alter comparative advantage and patterns of trade. "Today," says Stephen Cohen, co-director of the Berkeley Roundtable on the International Economy, a research group, "governments can create comparative advantage." The U.S. space program, the European Airbus venture, and the first Japanese semiconductor assault are oft-cited examples of actions that can alter trade patterns.

BUT WHY would governments want to promote a particular industry? Traditional trade theory assumes all markets are perfectly competitive, with all categories of companies earning a "normal" rate of return—computer manufacturers or hamburger stands, they all earn the same return, adjusted for risk, on capital and labor. If that's the case, there is no valid reason, apart from national security, for industrial countries to favor specific industries. But because getting the edge in high-tech industries depends on large R&D outlays and many of the industries have large and persistent economies of scale, they may eventually become dominated by a few firms. The new trade theorists argue that new technologies also create barriers that keep potential competitors out of the market. That happens, they say, in industries such as optical fibers, supercomputers, and commercial jet aircraft. And those barriers supposedly enable companies to earn supernormal returns.

If the theorists are right about high profits in high-tech industries, countries might be able to use subsidies to help domestic companies grab a bigger share of the world market and eventually raise profits at the expense of foreign competitors. Domestic GNP would rise, and some of the extra profits would trickle down from shareholders of the subsidized companies to the government and workers via taxes and wages. Econo-

mists James Brander and Barbara Spencer of the University of British Columbia were the first to argue this possibility.

A second incentive for departing from laissez faire, emphasized by Krugman, is that some high-tech industries may create valuable benefits for the rest of the economy. The computer and microchip industries generate design and production know-how that stimulates innovation in a range of other industries, from machine tools to cars to electronic toys. Import protection in the home market might raise the return on R&D for domestic companies while lowering it for foreign competitors who, as a result, might invest less. Because the domestic companies' competitiveness would improve, they could increase their share of unprotected markets and reap a net increase in national income.

The same reasoning applies to learning by doing. The logic here is that a company learns to produce more efficiently as it moves along what's called the experience curve. A protected home market could allow a company to produce more than it otherwise would and therefore learn more quickly than foreign rivals. This would allow the domestic company to compete more successfully and earn higher profits in export markets as well.

As theoretical principles, the new notions that some industries are more valuable than others—and that government can intervene to increase a country's share of such industries—seem persuasive. But the evidence that the theory can be made to work in the real world is weak. If competition is fierce, supernormal profits might not be all that super, even in industries with just a handful of large companies. In fact, Krugman points out that he hasn't been able to find a protected export industry in Japan or Europe that earns even average profits. Airbus, the joint European commercial jet aircraft venture, continues to rely on subsidies after 15 years. Price wars have depressed semiconductor profits all around the world.

Technological benefits "don't leave a paper trail," comments Krugman, so it's hard to gauge how important they are. Japanese experience in 64K random access memory chips had "wonderful effects by pushing process knowledge to new limits," according to G. Dan Hutcheson, a vice president of VLSI, a California think tank. That's likely to give Japanese companies an edge in the race to dominate the market for the 256K chip, he says. What's not clear, however, is whether Japanese dominance of commodity chip markets has much bearing on competition in the more profitable custom chip markets, where software for designing the chips is the determining factor in success.

In any case, European and Japanese promotion of high-tech industries has been less successful than commonly supposed. European efforts to foster high tech through R&D subsidies and import protection haven't expanded Europe's shares of the world markets in computers or semiconductors. The English computer industry and French semiconductor industries have achieved modest successes, but at a substantial cost to taxpayers. The Japanese have scored big in exports of chips and certain kinds of computer peripheral equipment, but exports of computer systems have fallen short of the Ministry of International Trade and Industry's goals. Increases in market share for computer systems have come largely in the domestic market and in Europe, not in the U.S., the world's largest computer market.

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Moreover, the theoretical justification of subsidies to high-tech companies seems less valid for the U.S. than for smaller countries. With few exceptions, U.S. corporations in the high-tech industries that are dominated by a handful of companies are bigger than foreign rivals, and they are in the largest market in the world. Companies such as Boeing, IBM, and AT&T can surely pursue aggressive export strategies without government help.

No matter how large the prizes, trade policy seems a particularly risky and unpredictable way for government to try to rig the technology game. Like other beggar-my-neighbor policies, protection of high-tech industries works best "only if you're the only government doing it," says Barbara Spencer. When all governments subsidize, they all lose, just as they do with tariffs. Even if other governments didn't copy the strategy, "there's good reason to fear that these policies would be hijacked by special interests," warns Dixit. Witness how difficult it was to wean Lee Iacocca from "temporary" quotas on imported Japanese cars. And since there are no generally accepted theories about how to pick winners or how companies behave in imperfectly competitive markets, knowing when and where to use protection to promote exports would require mountains of information about domestic high-tech companies and their foreign rivals that doesn't exist. Says Dixit, "To do better than the companies on their own, government would have to have more information than the companies do."

Protectionist policies might even prove counterproductive by limiting the spread of knowledge that comes about as a result of trade. Says William Reed, executive director of the Semiconductor Equipment and Materials Institute, "If the flow of production know-how that our members pick up by doing business in Japan were cut off, both the semiconductor-equipment and the semiconductor-manufacturing industries in the U.S. would suffer."

Even if government could pick the winners, attempts to protect them could harm other high-tech industries instead of benefiting them the way the theory suggests. Gene Grossman points out that protecting, say, the robot industry might push up the salaries of engineers, which would raise costs for computer manufacturers. Protection might also cause robot companies to bid up the prices of electronic components, making it harder for other industries that use the same components to compete in world markets.

IN SHORT, the new theory doesn't suggest strong reasons for the U.S. to adopt a strategic high-tech trade policy, and criticisms of the theory suggest plenty of reasons not to. Nonetheless, it's important for the U.S. to understand the motives behind such actions by other countries and try to persuade them to abandon predatory measures. "Otherwise," says Spencer, "if you just say you're going to be a good guy, your industries might get hurt."

The new trade theory might affect policy eventually, but not right away. Few lobbyists pushing for import protection read academic journals, and the new arguments have yet to become part of the trade debate in Washington. That's fine with the theorists, who are wary of giving vested interests ammunition to support protectionist policies. All the theorists want to accomplish now is to show how gray and critical an area lies between the poles of protectionism and dogmatic devotion to free trade. F