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STRATEGIC TRADE WITH MOSCOW: U.S. LEVERAGE IN THE POLISH CRISIS

INTRODUCTION

Twice within a week, President Ronald Reagan announced measures designed to encourage the lifting of repression in Poland. In his pre-Christmas address to the nation, the President imposed sanctions on the military junta now ruling Poland. Then in a December 29 statement, Reagan pointed the finger of accusation directly at Moscow, saying that "the Soviet Union bears a heavy and direct responsibility for the repression in Poland."

Because of the continuing and, it seems, mounting Soviet role in suppressing Polish freedom, the President imposed seven immediate economic and technology sanctions on the U.S.S.R. and concluded with the warning that he "will be watching events in Poland closely in coming days and weeks. Further steps may be necessary, and I will be prepared to take them."

The White House is correct in concentrating on America's economic and technological leverage -- it is surely the most powerful means available to influence Soviet behavior.¹ Economic and technological ties with the Communist bloc, moreover, are

¹ Some have argued that the most effective -- and strategically significant -- embargo would involve wheat rather than technology. See Marie Lavigne, *Les Relations Economiques East-Ouest* (Paris, 1979), esp. pp. 73-7. Regarding the effectiveness of a well-implemented grain embargo, see Paige Bryan, "The Soviet Grain Embargo," *The Heritage Foundation Background* No. 130 (January 12, 1981). For various economic options available to the West for retaliation against Soviet intervention in Poland, see William L. Scully, "The Polish Dilemma: Soviet Vulnerabilities and Western Opportunities," *The Heritage Foundation Background* No. 154 (October 19, 1981).

matters requiring intensive review -- even without the Polish crisis. The events of the past month, however, give the Administration a compelling reason to examine carefully the policy of U.S. trade with Moscow. It is clear that the West, and the U.S. in particular, needs to maintain "technological lead-time," or qualitative superiority, to compensate at least in part for Soviet quantitative advantages in key defense areas. Dr. Ellen C. Frost, Deputy Assistant Secretary for International Economic Affairs at the Department of Defense, explained:

To the extent that we can delay the acquisition by adversary nations of...vitaly important technologies and their associated end products by placing controls on exports, we are serving a very important national defense interest. The key concept is the preservation of precious lead time.²

The Soviet invasion of Afghanistan two years ago -- an event condemned even by the U.N. General Assembly, a body whose sympathies do not usually lie with the U.S. -- prompted former President Carter to tighten U.S. trade with the Soviet Union. President Reagan has been working to define U.S. trade policy with the Soviet bloc since he took office in January of 1981. On September 16, 1981, Assistant Secretary of Commerce for Trade Administration Lawrence J. Brady told the Subcommittee on International Economic Policy of the Senate Committee on Foreign Relations that the Administration was conducting a careful review of this policy. Even before the events in Poland, Brady stated his own conclusion: "Our feeling is, based on the policy review, that we may have to tighten strategic trade controls on goods and technology which can upgrade Soviet production in areas relevant to [Soviet] military strength," in order "to protect our national security interests."

TIGHTENING THE LAX SYSTEM

The present system of trade with the members of the Warsaw Pact is, indeed, seriously lax. In view of the situation in Poland, and in terms of U.S. long-range security interests, measures could be taken to preserve the U.S. technology advantage and deny Moscow the benefits of Western innovations. Among the measures available to the President are:

(1) Determining what items are especially significant strategically to the Soviet Union.³ The current licensing system

² Testimony before the Committee on Foreign Affairs, House, 96th Congress, First session, May 1, 1979, Extension and Revision of the Export Administration Act of 1969, Part 2, p. 15.

³ The high technology embargo of January 1980 involved a suspension, and not a revocation, of validated licenses for exports to the Soviet Union. See Wayne A. Schroeder, "Soviet-American Technology Transfer and United States National Security," Ph.D. Dissertation, University of Southern California, January 1981, p. 351.

is hopelessly flawed. Licensing criteria, for example, are open to judgment and analysis on the part of licensing officers.⁴ Delayed budgeting, understaffing, inefficiency, and lack of coordination, moreover, make the Export Administration office at the Commerce Department "one of the most controversial, ill-mannered, and frustrating programs in Washington."⁵ The current lists of "critical" technologies are highly deficient: many items that have clear strategic implications -- such as trucks and pipeline equipment⁶ -- must be included. A more sophisticated approach to the development of an adequate list of items not to be sold to the Communist bloc is needed. Hence, the President's intention to expand the list of oil and gas equipment in need of licensing is a step in the right direction.

(2) Preventing the flood of "information leaks" to Soviet students and other Soviet representatives. In 1979 alone, over a thousand Soviet business people and over eight thousand East European business visitors, scientists, industrialists, all essentially unsupervised by American intelligence, obtained information from U.S. industries. Besides documented cases of espionage and theft, the Soviet Union has also used student exchange programs to obtain valuable technical information from the U.S.⁷ These leaks are dangerous. When the President reviews U.S.-Soviet science and technology exchange agreements, he must look very carefully at the entire spectrum of information exchanges.

(3) Rejuvenating the international Coordinating Committee (COCOM), composed of the NATO nations (excluding Iceland, but including Japan). COCOM was formed in 1950 to set a control policy for trading with the Soviet Union.⁸ Western leaders agreed at the Ottawa Summit in July 1980 to "consult to improve the present system of controls on trade and strategic goods and related technology with the U.S.S.R." This commitment should involve closer coordination of national licensing procedures and

⁴ Talbot S. Lindstrom and Paige Bryan, "Strategic Economic Policy: Geopolitical Survival in the 80's," National Defense, April 1981, p. 19.

⁵ See Jack D. Verona's Testimony before the Senate Governmental Affairs Committee on September 24, 1980.

⁶ Jonathan Stein, "Soviet Energy: Current problems and future options," Energy Policy, December 1981, pp. 301-315. Also, Steven C. Goldman and Wayne A. Schroeder, "The Geopolitics of Energy," Policy Review, Summer 1981, vol. 17, and David Fairlamb, "'Finlandization' of Europe?", Dun's Business Month, November 1981.

⁷ David E. Hoppler, "The National Security Implications of Strategic Technology Transfer," University of Southern California Defense and Strategic Studies Program, Working Paper 3-81, May 1981, pp. 62-64.

⁸ For a cogent study of COCOM and multilateral controls, see Wayne A. Schroeder, Ph.D. Dissertation, op. cit., pp. 129-132.

greatly expanded enforcement efforts. At the COCOM meetings scheduled for the end of this month, especially in light of the Polish situation, President Reagan is expected to press for more determined European moves to tighten strategic trade with the Soviet Union. He should do the same when he meets with the members of the Tripartite Commission, a mechanism formed at the Ottawa summit, which serves as a new forum for U.S., Japan, and the European Economic Community to deal with steel, autos, high technology products, services, investments, subsidies, dumping, and other areas of conflict in East-West trade relations.

(4) Limiting sharply U.S. requests for exceptions to the COCOM list. In the past decade particularly, American requests for exceptions have skyrocketed, soaring from 1.6 percent in 1962 to 25.6 percent in 1970, and to a staggering 62.5 percent in 1978.⁹ Given that the COCOM list is already rather lax because of relatively more "liberal" European attitudes toward East-West trade, this not only suggests an overly eager U.S. desire for trade at the expense of national (and, in general, Western) security, it also belies the argument that "foreign availability" would deny the U.S. lucrative trade opportunities with the U.S.S.R.

(5) Developing an adequate system of determining -- accurately and convincingly -- "foreign availability." No such system is currently available.¹⁰ For example, "A Foreign Availability Assessment for the Semiconductor, Electronic Components and Instrumentation Industries," a study by a private research group submitted to the Department of Commerce on August 29, 1980, concludes that "a system for making foreign availability assessments during the decade of the 1970's did not exist and such assessments were made on an ad-hoc basis." Moreover, the report said that interviews with government administrators and industry representatives indicated that determination of foreign availability was not a significant factor in reaching decisions on export licensing cases. The U.S. still has the competitive edge over other Western producers in several areas, such as computers, machine tools, radar components, jet engines, satellite reconnaissance systems, and a myriad of seismic tools for oil exploration, of which underwater listening devices are the most sensitive.¹¹ But even in many areas where the U.S. appears not to have a competitive edge, a thorough study of actual foreign availability, which must take into consideration comparability in quality as

⁹ Lawrence J. Brady, testifying before the Permanent Subcommittee on Investigations of the Committee on Governmental Affairs, U.S. Senate, 96th Congress, Second session, Transfer of Technology to the Soviet Bloc, February 20, 1980, p. 21.

¹⁰ Brady, ibid., p. 64.

¹¹ See Connie Freisen, The Political Economy of East-West Trade (New York: Praeger Special Studies, 1978). Another useful study is by Miles M. Costick, The Strategic Dimension of East-West Trade (Washington, D.C.: American Council for World Freedom, 1978).

well as production rates, will reveal that the U.S. is in a superior bargaining position.¹²

(6) Developing a workable plan of reciprocation. Short of a total economic embargo, it would seem expeditious to develop a system of exchange whereby strategic materials -- some of which are available in the U.S.S.R. -- could be obtained by way of payment for American goods.¹³

(7) Developing a cautious credit policy that would jeopardize as little as possible the strategic interests of the U.S. At present, there is a serious repayment problem. The \$27 billion Polish debt to the West is especially alarming and default could cause enormous problems for the Western banking system. The total Warsaw Pact debt to the West, according to CIA estimates, is nearly \$80 billion. These debts give the U.S.S.R. tremendous political leverage, which would be aggravated even further by increased Western dependence on Soviet oil.

(8) Continuing a firm policy on U.S. involvement in the Siberian pipeline project currently under negotiation with the Western nations. Both the House and Senate (the former on July 21, 1981, the latter on October 7, 1981), have voted on resolutions disapproving U.S. participation in the Soviet Yamal natural gas pipeline. These resolutions urge U.S. congressmen to support the President in his efforts to establish allied cooperation in developing alternative Free World energy sources. The President's decision on December 29 to stop the sale of pipeline equipment indicates that he recognizes the seriousness of the issue.

(9) Establishing a uniform U.S. trade policy for the Communist bloc. Present technology leakage through Eastern Europe -- a result of applying the January 1980 trade embargo only to the Soviet Union -- is dangerous and self-defeating.¹⁴

(10) Coordinating an information and public relations campaign explaining the details of the U.S. position so that the American public, as well as the European community, understands the principles behind the policy and sees its relevance to recent Soviet

¹² Eagle Research Group Final Report to Department of Commerce Office of Export Administration, "A Foreign Availability Assessment Program for the Semiconductor, Electronic Components and Instrumentation Industries," August 29, 1980, pp. 2-3.

¹³ Chromite, cobalt, and titanium are cases in point. See Dr. Daniel I. Fine, "Mineral Resources Dependency Crisis: Soviet Union and United States," World Affairs Council of Pittsburgh, 18th World Affairs Forum, The Resource War in 3-D, June 17, 1980, p. 46. Also James T. Bennett and Walter E. Williams, Strategic Minerals: The Economic Impact of Supply Disruptions (Washington, D.C.: The Heritage Foundation, 1981).

¹⁴ See Wayne A. Schroeder, "Technology Transfer and U.S. National Security," Military Science and Technology, forthcoming.

actions. The support of Senators Jesse Helms of North Carolina and Strom Thurmond of South Carolina, together with the strong backing of AFL-CIO President Lane Kirkland, should prove useful in this effort.

(11) Reconsidering the bill introduced by Senator Jake Garn of Utah on September 24, 1980, calling for a separate Office of Strategic Trade to administer the export administration system mandated by the Export Administration Act of 1979. Passage of this bill would assure that export control responsibilities within the government would be consolidated, and procedures would be established for assuring that U.S. foreign trade would be carried out with the security of the U.S. firmly in mind. For example, the Office would be staffed with well-trained technical personnel able to make the complex analyses required by the Act of 1979. It is likely that the bill will be reintroduced in February 1982.

A HISTORY OF HELPING THE RUSSIANS

Adopting these recommendations would impose a stiff penalty on Moscow for its behavior in Poland. It would also go a long way to remedy the deplorable practice of the U.S. -- and the West -- of providing the Soviets with valuable military technology which certainly has helped build today's threatening Soviet arsenal. Legally and illegally,¹⁵ U.S. businessmen have been supplying the Soviet military with sophisticated technology and equipment for years. Usually on credit -- at times from the Ex-Im Bank, the U.S. government agency originally set up to finance trade with the U.S.S.R. -- the products of American high technology research have been flowing to the Communist bloc. This bolsters Soviet military capabilities, which then must be countered by the U.S. -- at great cost to the American taxpayer. For example, the Zil truck plant, which manufactures military vehicles such as missile launchers and armored personnel carriers, was built with the help of the U.S., which provided almost \$13 million worth of computers and spare parts. And the American contribution to the Kama River plant -- which produced trucks found in Afghanistan -- was, by conservative estimates, \$500 million. (Actually, Kama River is manufacturing not only 10-ton multiple-axle heavy duty trucks but also armored personnel carriers, heavy assault artillery, rocket launchers, and dual-use transport vehicles.)

¹⁵ See the excellent exposé of illegal trade with the U.S.S.R. in the September 1981 issue of New West entitled "The Spies Among Us." According to Senator Henry Jackson of Washington, the intelligence community has estimated "that between 1973 and 1977, \$150 million of Western embargoed goods were illegally shipped to the East," Congressional Record-Senate, May 2, 1980, p. S 4505.

Such sales have a negligible impact on the U.S. balance of trade: in 1979, for example, before the Carter embargo, total American sales to the U.S.S.R. amounted to no more than 2 percent of all U.S. exports, of which no more than .05 percent involved high technology goods. Yet the strategic significance may be great enough to justify Washington's violation of the principle of free trade.

The case of government control of East-West trade deserves careful assessment. A good many economists, even those who concede that our defense budget might be lower if the Soviets were denied access to Western technology, are nevertheless opposed to any U.S. embargoes on the ground that free trade, as a rule, is the only sound policy. If Washington does not sell, so the argument goes, European competitors will, and the U.S. will lose a lucrative market. In fact, however, in many areas, the U.S. still enjoys a monopoly.

Potentially strategic Western and U.S. trade with the Soviet Union is almost as old as the Bolshevik revolution itself. Indeed, it took Lenin no more than two years to conclude that "one cannot be satisfied with the collapse of capitalism. It is necessary to take all its science, technology. Without that," he wrote, "we will not be able to build Communism."

As soon as he realized that his economic policies were not working, Lenin started luring capitalist businessmen -- a policy continued by Stalin. And the U.S. was eager to cooperate. The famous five-year plan of 1928-33, still thought by many to have been a remarkable Soviet achievement, was very much the product of American management and engineering. Stalin himself acknowledged this in 1944 when he told the president of the U.S. Chamber of Commerce that two-thirds of the large industrial projects in the Soviet Union had been built with American assistance. Antony Sutton's exhaustive three-volume study, Western Technology and Soviet Economic Development (published by the Hoover Institution in 1968, 1971, and 1973), conclusively demonstrates the staggering extent of the U.S. contribution to its main adversary's present might.

By 1949, when the U.S. passed the Export Control Act restricting trade with the U.S.S.R., the Soviets had benefited immensely from the extravagant U.S. war-time venture called Lend-Lease. Under this arrangement, the Soviets received \$2.6 billion worth of American non-military goods, plus \$8.5 billion in military hardware, including \$1.25 billion of the latest American industrial equipment. (This was in addition to more than \$10 billion worth of industrial and military equipment dismantled in Germany and shipped to the U.S.S.R. in what has been called "the greatest and most systematic looting of any defeated country in the history of the war."¹⁶) The U.S. is still waiting for the Soviet Union to pay its Lend-Lease debt.

¹⁶ Carl Gershman, "Selling Them the Rope," Commentary, April 1979.

Broken contracts, disrupted operating and export plants, and rejected invoices followed during the Stalinist regime; still Western businessmen were not discouraged. Thus Krushchev's predictable realization that he too needed Western technology was greeted by many capitalist businessmen with undisguised enthusiasm. When the Soviet leader announced in 1959 that the U.S.S.R. would buy whole factories, U.S. businessmen started supplying designs and specifications, process technology, engineering capability, equipment, as well as startup and training programs. Some fifty complete chemical plants were ordered from the West between 1959 and 1961.

Many of the chemical plants built then and in the later sixties had direct military applications. Fertilizer plants, for example, are easily adapted to produce explosives -- a fact well known at the time, though the U.S. nevertheless continued to supply the Soviets with the needed equipment. In one instance, less than a year after the Cuban missile crisis, there were congressional warnings against the military implications of selling to the Soviets \$10 million worth of potash mining equipment by the Joy Manufacturing Company of Pittsburgh. Ignoring the warnings, Congress approved not only that deal but also a series of ten fertilizer plants arranged by Armand Hammer's Occidental Petroleum Corporation.

One important restraint, at least, was imposed in 1961. President John F. Kennedy barred the export of ball-bearing machines produced by the Bryant Chucking Corporation of Vermont, on the ground of strict national security. The Soviets waited patiently, convinced that the U.S. would eventually succumb to pecuniary temptation. This persistence was rewarded in 1972: President Nixon, at the advice of Henry Kissinger, approved the deal. As warned, the ball-bearing equipment soon was being used by the Soviet military. Four years later, Defense Intelligence officials informed Congress that the bearings could "now be used in the guidance equipment of Soviet missiles." This sale has turned out to be one of the most important decisions of the Nixon Administration.¹⁷

Shortly after the Republican victory in 1968, Congress liberalized the Export Control Act, making it much easier to trade with the Soviets; by the time of the 1979 Afghan invasion, the list of strategic items which the U.S. was selling the Russians had become truly staggering. According to Lawrence Brady, during

¹⁷ The military application is fairly straightforward: these grinders reduce the friction of moving parts in the guidance mechanism of a MIRV warhead, thereby enabling the missiles to change direction in flight rapidly, and thus get sharper on-target capability. See Miles M. Costick, "The Soviet Military Power as a Function of Transfer from the West," in An Analysis of U.S. Foreign Trade Policy (Sterling, Virginia: Young America's Foundation, 1979).

the past ten years the U.S. sold the Communists semiconductors, array transform processors, computers, machine tools, chemical processes, and turnkey projects combining non-strategic and strategic technology. Some specific examples: an RB-211 turbo-fan engine, suitable for bombers (developed with \$300 million in U.S. government research and development grants), bought by the Soviet Union from Lockheed; technology sold by Litton Industries now being used to help Soviet planes and ships track American submarines; a 110/10C Sperry-Univac computer, personally approved for sale by Carter in 1978, now being used by the Soviets to improve their Backfire bomber; and space suits that cost the U.S. taxpayer about \$20 million apiece to develop have been sold the Russians for a mere \$150,000 each.

In the face of such evidence, how could Washington even consider continuing to sell strategic goods to the Kremlin? One rationale is accepted even by some conservatives; they believe the old argument that if the U.S. does not sell the item to Moscow, then someone else will, and that embargoes are therefore useless.

THE FOREIGN AVAILABILITY ARGUMENT

In the first place, the data base for deciding whether goods are available from a non-U.S. source is, according to Lawrence Brady and other experts, often "weak to nonexistent." Indeed, the chief offender in seeking waivers of the general Western embargo (known as COCOM) against strategic traffic with the Communists has been the U.S. rather than its allies. Specifically, in 1962, the U.S. made only 1.6 percent of the 124 requests for exceptions, but by 1978, U.S. exception requests had escalated to 62.5 percent out of a total 1050.

The Soviets, moreover, often prefer to do business with U.S. giants like IBM and Control Data, sometimes even when a European competitor offers them a lower price. Marshall Goldman points out in his 1975 study, Defense & Dollars: Doing Business with the Soviets, that in such cases as the Kama River truck plant the Russians were set on having America help them build it; they felt that American equipment and engineering were the best available and they wanted top quality, regardless of the cost. In addition, discussions with Soviet officials always leave the impression that Russians are mesmerized by size, and only the U.S. comes close to matching the size of the Soviet market. Still more important is the fact that in many cases -- such as the Bryant precision bearings, the space suits, and, at present, many types of computers -- the U.S. produces the best equipment in the world. The national computer industries of West Germany, Great Britain, France, and Italy trail the U.S. firms. (Moreover, the Soviet Union may well have trouble adapting to changes in technology if it shifted exclusively to European suppliers.)

The foreign availability argument is so thin at times that it raises serious suspicions about its validity when applied in other, less easily verifiable instances. Carter used it, for example, in the summer of 1978 to justify his approval of a controversial sale by Dresser Industries of a \$144 million turnkey plant for the manufacture of deep-well oil drilling equipment, even though a Defense Science Board task force headed by Texas Instruments President J. Fred Bucy had declared categorically that the technologies involved were "solely concentrated in the United States." Senator Henry Jackson charged that Carter had simply succumbed to Commerce Department and Dresser Industries pressures and ignored opposition by a National Security Council task force. Indeed, the Dresser sale included a computerized electronic beam welding machine that can be used to manufacture jet aircraft and has nuclear as well as laser applications.

The evidence indicates that no accurate and convincing system of determining "foreign availability" exists as yet. In his testimony before the Permanent Subcommittee on Investigations of the Committee on Government Affairs, Lawrence Brady said on February 20, 1980:

[a]n arbitrary selection of fifty consecutive national security cases from 1978 reviewed by my Special Assistant, Paige Bryan, in response to a Freedom of Information request, revealed a recommendation of approval in every instance by the Commerce Department. Nearly three-fourths of the approvals were recommended primarily on the evidence of foreign availability. No sources for the data used to assess foreign availability are given in any of these cases. When asked, however, licensing officers cite: industrial sources, company brochures, the Bureau of Standards, and other governmental agency studies. In none of these cases was it suggested that the State Department had been asked to negotiate with the governments of foreign producers in order to secure the elimination of possible foreign sales to the Communist countries. [emphasis added.]

Actually, a number of businessmen appear quite ready to concede the shakiness of the foreign availability argument in many cases -- computers, for example -- but nonetheless claim that the U.S. should sell the Russians such sophisticated items because it will be profitable in the long run. After all, the Soviets -- so the thinking goes -- will need to buy maintenance equipment from U.S. suppliers who then will have a corner on the market for years. The evidence, however, seems to build an altogether different scenario. According to a 1981 Pentagon study, the Soviets have already copied many different types of U.S. integrated circuits, including computer logic and memory chips from practically all the major U.S. microcircuit manufacturing facilities.¹⁸ With a relatively insignificant investment,

¹⁸ Caspar Weinberger, Soviet Military Power, Government Printing Office, September 1981, p. 74.

therefore the Soviets reap the benefits of billions of dollars of our research and development. And the computers, of course, have military uses. IBM 360 and 370 computers, for example, are believed to be the mainstay of the Warsaw Pact's air defense system. The complex of Western-manufactured radar devices and computers in Moscow's Vnukovo Airport traffic-control system gives the Soviets air-defense control capabilities they were unable to design themselves.

Perhaps the most important aspect of commercial relations with the Eastern bloc, however, is their questionable ability to pay for the goods they buy. Soviet bloc debt was alarming as early as 1977 when "only" \$40-\$45 billion was owed the West. Today that debt totals nearly \$80 billion. The Wall Street Journal reported on February 22, 1977, that many observers were becoming concerned about the possibility of Soviet blackmail. That concern was echoed in March 1981 by Senator Thurmond, who told Congress:

U.S. policymakers should never lose sight of the fact that these huge outstanding Soviet debts to our banks serve to compromise needed policy decisions for fear of endangering payment.

Though U.S. and international banks probably now realize that the Soviets and the Warsaw Pact countries are bad credit risks, the banks continue to increase the loans to avert massive defaults. In effect, the lending banks have thus become "hostage" to their debtors.

The only hope the Western banks seem to have of being repaid is to continue to foster East-West trade. The great danger is that a Communist payment failure could start a banking panic in the West. In this sense, the Communists have the West both ways: as long as the joyride lasts they get massive infusions of technology, essentially free. When it concludes, they could sink the banking system.

To make matters worse, American firms have trained hundreds of Soviet technicians in the U.S. Teams of Soviet specialists -- ostensibly looking into possible purchases -- have toured defense-related American plants. A member of one group, which closely inspected the Boeing, Lockheed, and McDonnell-Douglas factories in 1973 and 1974, admitted privately to a Boeing official that purchases had never been contemplated -- meaning of course that the real purpose of the trip had been industrial espionage. As for so-called student exchanges -- those who come from the U.S.S.R. are usually experienced engineers, scientists, and managers of research and development establishments who concentrate on study programs in the U.S. in semiconductor technology, computers, and other fields of applied research.

WHY DOES THE U.S. DO IT?

If Soviet behavior is readily explicable, the same does not appear to be true of the West. The U.S., in particular, seems anxious to overlook the costs -- both financial and psychological -- of trade, especially strategic trade, with the Communist bloc. One reason might be the fact that not everyone is affected equally. To be sure, the higher Pentagon budget needed to respond to the more sophisticated Soviet technology is borne by everyone. Companies like Control Data and Bryant Chucking, however, still appear to come out ahead, at least in the short run. One might think that businessmen too would be among the most concerned about contributing to the growing power of a nation whose leaders are dedicated to the eradication of capitalism. But some U.S. weapons manufacturers seem eager, even impatient, to do business with the Soviets. According to John Markoff, writing in the July 7 and 21, 1980 issue of Inquiry magazine, "some of the corporations at the very heart of the defense establishment" were angry at Jimmy Carter's embargo on strategic goods to the U.S.S.R. because they found themselves "having to forgo lucrative trade opportunities in the name of national defense." Lucrative indeed, when we need to improve our defense capabilities to catch up with the Soviets who -- with our help -- keep updating their war machine.

There are signs, however, that the public, once its consciousness has been raised, is willing to stand up for their nation's security interests. The Washington-based Investor Responsibility Research Center reports that shareholders in over two dozen companies were asked in 1981 to vote on resolutions to terminate business and trade relations with Communist countries. One California group, Stockholders for World Freedom, has proposed that Occidental Petroleum report the extent of its trade with the Communist bloc. Another member of the group has asked Rockwell International (the Defense Department's fifteenth largest military contractor) to cease all trade with the Communists. The resolution reads in part as follows:

Rockwell, as a prime defense contractor, ought not to be helping [Communist] threats to world peace and free societies. We should instead direct our resources toward our own economy and our Free World Allies. If you are considering voting against this proposal merely out of an abstract sense of political tolerance, consider further that you would be voting against the best long-run interest of yourself, your family, your corporation, and your free country.

Yet the resolution contains a fatal flaw. Rockwell's Board of Directors responded:

To the extent that foreign trade with a particular country or countries is considered to be inconsistent with United States Government policy objectives, controls

or embargoes are imposed. Decisions on these matters are properly in the domain of the Government and not, in our view, in the domain of corporations.

It is thus up to the government to make the policy on strategic trade with the East.

TOWARD A WISER POLICY

A great number of Americans would probably support an embargo on the sale of high technology goods to the Communist countries were it possible to demonstrate beyond refutation that such a move would be absolutely effective in protecting U.S. national security at a reasonable cost. While absolute proofs may be -- in a rigid logical sense -- impossible, the evidence should convince all but the most obdurate skeptic that the West must take tougher steps to slow or even halt the transfer of critical technology to the East.

Opting for an embargo, however, is still a long way from imposing it effectively. The first problem is to determine with some degree of accuracy what items qualify as strategically significant enough to warrant controls. It has been argued, for example, that everything we sell, including wheat, contributes to the growth of the Soviet military insofar as assistance from us frees funds for the Soviet war machine. That argument is not without merit, the President's decision to lift the grain embargo notwithstanding. Another important matter involves trade with the Soviet satellites. The Carter embargo, for example, was not directed against the satellites but only against the Soviet Union. Understandably, the predictable leakage weakened considerably the credibility and effectiveness of the embargo.¹⁹ A cardinal rule of economic warfare is that it must be pursued seriously; how else are we to enlist the help of our Western allies in this endeavor? This help, indeed, is crucial, not only because the allies already have access to many American strategic items but also because future U.S. developments will be difficult to keep secret -- to say nothing of advances the allies will make on their own.

Finally, a problem of growing difficulty is deciding how to keep strategic military technology from reaching our own commercial markets. One case involves the very complex function microcircuit devices developed under the very high speed integrated circuit program of the Defense Department.²⁰ Although the Pentagon will

¹⁹ See Richard N. Holwill, ed., A Mandate for Leadership Report: The First Year (Washington, D.C.: The Heritage Foundation, 1982), Chapter 6.

²⁰ Reported in the February 16, 1981, issue of Aviation Week & Space Technology.

seek export controls on these devices to prevent their reaching Communist countries, program director Larry Sumney has admitted that similar processing will probably find its way into U.S.-produced devices intended for the consumer-industrial market. Some of the contractors involved in producing these devices also have overseas affiliates or subsidiaries; should they be denied this technology? And what about further research in other areas -- specifically, in materials and physical processes needed to achieve submicron geometrics, which is the next phase of the program? Normally, basic research is not subject to export controls; should this be an exception?

Despite these problems, the issue must be confronted. Especially at this time when the U.S. is seeking ways to penalize the Soviet Union for interfering in the affairs of Poland, and preventing further -- possibly even military -- involvement there, the control of strategic trade is an excellent lever. The opportunity is here, and millions -- both in Poland and in America -- are waiting.

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