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Stakes and Risks in Economic Sanctions

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The recent conflict between the United States and its allies over the Soviet natural-gas pipeline was a serious policy problem in its own right, but it also highlights a long-standing debate over the broader issue of the objectives and effectiveness of Western economic sanctions against the Soviet Union and its allies. This wider and more fundamental controversy is likely to intensify in the near future as governments individually, and the ministers of the countries of the North Atlantic Treaty Organisation (NATO) collectively, attempt to formulate new policy on trade, technology and financial flows to the Communist countries.

The sanctions issue is a difficult one for policy makers because it is both technically complex and politically sensitive. The purpose of this article is to develop some common ground for future policy discussions by providing a non-technical and dispassionate survey of the key issues involved in the decision to implement sanctions.

In order to minimise technicality and to maintain a sharp focus, we limit discussion to the control of commodity trade, although many of the points made also apply to the control of credit and technology flows. Furthermore, to avoid the politically charged atmosphere surrounding the recent controversy, we eschew consideration of the pipeline or other current sanctions such as on items listed by the Coordinating Committee (CoCom). Instead, the discussion considers the problems which would be encountered in unilateral and multilateral attempts to impose new sanctions or to expand existing controls. The focus is on Western trade relations with the Soviet Union and its East European allies — that is, the seven East European members of the Council for Mutual Economic Assistance (Comecon) — although most of the discussion applies equally to other potential adversaries.

In order to provide structure to the discussion, it is useful to distinguish between (i) the objectives of economic sanctions, (ii) the policy instruments used to attain

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those objectives and (iii) the various constraints on their effective use. Sanctions, or the threat to use them, are an instrument of economic policy designed to serve several, not necessarily mutually exclusive, foreign policy, military or strategic objectives.

Historically, most sanctions imposed by Western countries have sought to induce a change in another country's behaviour by inflicting economic damage. The United States' sanctions against the Soviet Union in response to the invasion of Afghanistan are a recent example of sanctions with this motivation.

Another objective of sanctions is to reduce or slow development of an adversary's military or strategic capabilities by raising the economic cost of acquiring imports or import substitutes. For example, controls imposed by CoCom restrict shipments of Western products and technologies of strategic importance to the Soviet Union and its East European allies in order to force those countries to reallocate resources to produce more expensive domestic substitutes and thereby increase the costs of acquiring military or strategic capabilities.

A third rationale for sanctions is to send a symbolic message of displeasure with another country's behaviour (which may also be for internal political purposes or directed at allies). The decision to institute sanctions in these circumstances may demonstrate willingness and ability to impose economic costs on an adversary and incur domestic costs in support of a principle, even though there is little expectation that the sanctions will affect the objectionable behaviour. The recent suspension by the United States of most-favoured-nation status for Poland may be an example of this type of sanction.

Both economic and political factors can constrain the effective use of sanctions. Countries that impose sanctions incur economic costs which include losses in output, employment and economic rents and - particularly in the case of multilateral sanctions - the costs of organising, policing and enforcing a coalition of exporters. The ability of the countries wielding sanctions to bear these costs is a major constraint on their potential effectiveness. General economic and political conditions such as high aggregate or sectoral unemployment and proximity to elections may also act as constraints on the ability to bear costs in pursuit of national policy objectives. The distributional effects of prospective sanctions, both within a country and among members of a coalition imposing sanctions, are a related potential constraint since they determine in part the probability of internal political opposition to sanctions as well as of conflicts among the allies.

Another potential source of conflict among the Western allies is the existence of different and sometimes conflicting ideological perspectives on the role and importance of trade in overall East-West relations. At the risk of caricaturisation, two polar views can be identified: the detente-is; view that trade has mutual economic and political advantages and can reduce dangerous tensions between...
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East and West; and the 'hard-line' perspective which emphasises the one-sided benefits for the East of trade with the West and the fear that trade could serve to 'sell the rope' with which the Soviets will ultimately hang the West. These extreme views define a continuum of ideological perspectives on East-West trade.

This is not the place to engage in a discussion of the relative merits of these competing views. They are important here because policy making on sanctions is constrained by the consensus, both national and international (that is, among allies), on the ideological foundations of East-West trade. Both the degree of consensus and its relative position on the ideological spectrum determine the potential scope and effectiveness of sanctions. Failure to achieve a consensus, or shifts in the consensus, will limit the ability of policy makers to conduct consistent long-term policy and may even cause sanctions to 'backfire' if they sow discord among the Western allies.

A reasoned approach to policy making requires consideration of three important questions. (i) Under what circumstances, if any, is it possible to use sanctions to impose significant economic costs on the targeted country or countries? (ii) What are the economic costs borne by the country or countries imposing sanctions? (iii) Even if it is possible to impose significant costs on targeted countries, are sanctions effective in achieving their ultimate foreign policy, military or strategic objectives?

In what follows, we discuss the first two issues in some detail and outline a framework which permits their systematic evaluation. The third issue is undoubtedly the most important, but it is also the most difficult to assess. The mere ability to cause significant economic damage to an opponent may not force that country to change its behaviour or reduce its military or strategic capabilities. The targeted country's willingness and ability to bear costs in pursuit of its objectives is an important factor determining the ultimate efficacy of sanctions. Indeed, there is some danger that sanctions may backfire - by strengthening an adversary's determination or by reducing its dependence on trade, technology and credit flows from abroad and increasing its efficiency in the use of the resources at hand. A reasoned response to this question of ultimate efficacy requires a detailed case-by-case study of specific decisions on sanctions and is beyond the scope of this article. But the question itself should be foremost in policy makers' minds.

ECONOMIC EFFECTS OF SANCTIONS

The first stage in a comprehensive evaluation of the potential efficacy of using economic sanctions to achieve specific foreign policy, military or strategic objectives is for policy makers to reach some consensus on their ultimate policy
goals. If sanctions are to be used for other than symbolic purposes, policy makers need a strong assurance that there is, at least potentially, some level of economic damage which - if sustained over time - would force the targeted countries to change their objectionable, behaviour or slow down development of their military or strategic capabilities. Without this basic agreement there is no point in considering sanctions except as a symbolic gesture.

The second stage in the evaluation of sanctions is a reasonably accurate assessment of the conditions under which it may be possible to inflict economic damage on Soviet bloc opponents and, too, of the likely costs to be borne by Western, exporters acting alone or in concert. In this section we outline first of all the economic costs and benefits of Western sanctions and then we discuss some of the critical problems of implementation. The discussion focusses largely on multilateral sanctions because they are central to the current controversy.

*Economic Costs and Benefits of Sanctions*

The economic costs for the West of imposing new or strengthening existing controls on exports to Comecon countries are (i) the short-run transitional costs of adjusting to a potential loss of Western production and employment opportunities plus (ii) the costs of administering the sanctions less (iii) any gains associated with higher Western export prices in cases where exports are restricted, but are not completely embargoed. The economic 'benefits' for the West are the costs inflicted on Comecon countries, which include having to pay more for certain imports, having to reallocate domestic resources to produce more expensive import substitutes and having to increase their expenditures for industrial espionage and the illegal acquisition of controlled goods.'

Considerable attention is devoted to these costs and benefits below, but two general observations should be made here. The first point is that the cost to the West of reduced exports is largely a temporary one. Labour, capital and other resources may become unemployed temporarily if new and unanticipated sanctions are imposed. Over time, these resources will find new employment, although possibly with lower wages and profits. Some part of these lower wages and profits is a permanent loss to the Western countries, but most of the loss to producers is offset by lower domestic consumer prices. The West's willingness to bear these costs is a constraint which determines, in part, the potential efficacy of sanctions. The overall health of the economy itself affects a country's willingness to incur costs. For example, a given increase in unemployment is more onerous in a period of high and prolonged unemployment than it is in a period of rapid economic growth.

The second observation is that although the economic costs inflicted on Comecon countries are considered a benefit to the West, the imposition of these costs is simply a means to an end. Thus when we refer to the potential benefits or
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The efficacy of sanctions, we are assuming that the greater the economic costs imposed on the Soviet bloc, the higher the probability that the West will achieve its ultimate policy objectives. This assumption itself is a source of fundamental controversy.

The potential economic effectiveness of sanctions depends on the ability of Western exporters to restrict sales and raise prices - that is, their oligopoly power. Since the effective use of sanctions often requires explicit coordination and control of a number of exporters and importers, we review, first, the factors which determine potential oligopoly power and then we discuss the critical problems of building a coalition of Western exporters, which we will call a political export cartel.

A Western cartel's potential ability to impose economic costs on Comecon countries depends on the ease with which the cartel can raise import prices by collectively restricting exports. The responsiveness, or elasticity, of import demand facing the cartel is a measure of the importers' dependence on exports from the cartel and a useful summary indicator of the cartel's ability to increase prices. The more inelastic the demand for cartel exports, the less responsive are the purchases of Comecon importers to an increase in prices and the greater is their dependence on the cartel.

The responsiveness of targeted countries' demand for imports from the cartel is determined by several factors: (i) the total elasticity of demand by targeted countries for the good, regardless of the source of supply, (ii) the responsiveness of non-cartel supply to a change in price, (iii) the possibilities for substituting between cartel and non-cartel output, and (iv) the cartel's share of total exports of the commodity to Comecon countries.

The responsiveness of Comecon demand for imports of a specific commodity from all sources is determined by a number of factors. In cases where imported and domestically-produced goods are perfect substitutes, the demand for imported goods is the difference between the quantity demanded by domestic buyers and the amount supplied by domestic producers at any given price. The less responsive are domestic supply and demand, the less elastic total demand for imports will be.

The short-run elasticity of domestic demand reflects both lags in the adjustment of buyers to a price increase and the availability of substitutes. The longer it takes buyers to adjust their purchases to a price increase and the fewer the close substitutes available, the more unresponsive domestic demand will be. The short-run elasticity of domestic supply reflects the ease and expense with which resources can be transferred among competing production processes and, in addition, the availability of domestic stockpiles of the good. Domestic supply is more unresponsive, the more specialized and scarce the resources required for production and the smaller the amount of the good available in inventories or stockpiles. The extent of a country's import dependence is directly related to the magnitude of the gap between domestic production and consumption and the degree of difficulty in changing consumption and production patterns in response.
to a price increase." Import demand is usually more inflexible in the short run than in the longer run because it takes time to adjust to price shocks. For this and other reasons, discussed below, the cartel's oligopoly power will tend to erode over time.

A cartel-induced price increase will create incentives for countries that are not party to the cartel to increase their exports to the Soviet bloc. The responsiveness of non-cartel suppliers to a price increase also depends on the ease and expense of shifting resources to increased production and on the existence of stockpiles of the good.

Trans-shipment of controlled goods may significantly weaken the cartel's effectiveness. In this context, the cartel's effectiveness is not appropriately measured in terms of the ability to deny targeted importers access to certain goods or technology, although this may be a legitimate goal of export controls. Rather, effectiveness is measured as the ability to raise the price (or resource cost) paid by targeted Comecon importers. Effective control of prices requires either a uniform restriction of exports to both targeted and non-targeted importers or a system of discriminatory export controls and prices that is combined with effective control of the ability of non-targeted countries to trans-ship to Comecon countries.

In the first case, with effective uniform restrictions in total cartel exports to both targeted and non-targeted importers, trans-shipments are not really an issue because the cartel has raised the cost of imports to Comecon countries whether they acquire them directly from the cartel or through trans-shipments. In the case of discriminatory restrictions on targeted and non-targeted importers, however, trans-shipment is a critical issue. As we discuss below, there may be a number of reasons for the cartel to maintain a two-tiered discriminatory pricing system for targeted and non-targeted importers. But the cartel will have little control over prices and will cause minimal damage to targeted importers if it simultaneously allows non-targeted importers uncontrolled access to cartel exports and lacks control over trans-shipments from these countries to Comecon countries. In this case, targeted and non-targeted importers have an incentive to collude to divert cartel goods to the Soviet bloc, at prices intermediate between those established for targeted and non-targeted markets.

There are not many internationally traded goods for which there exist either perfect substitutes or no substitution possibilities at all. Ostensibly homogeneous grains are in fact often characterised by significant differences in protein content and quality. Certain computers may have unique capabilities, but the same calculations can often be done more slowly and laboriously with less sophisticated machines. The lower the substitutability between cartel and non-cartel goods, the less responsive import demand in Comecon countries will be.

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To summarize, the responsiveness of demand for cartel goods in Comecon countries is critically important in determining the economic costs and benefits of export controls. The more unresponsive is import demand facing the cartel, the larger are the costs imposed on targeted importers, the larger is the cartel's potential terms-of-trade gain for any partial (that is, non-prohibitive) restriction on exports and the smaller are the cartel's adjustment costs for any given increase in export prices.

At one extreme, if demand by targeted importers is perfectly elastic, the cartel would be unable to impose any economic damage on Comecon countries, but could itself incur substantial displacement costs if it attempted to restrict exports. At the other extreme, totally inflexible import demand in the Comecon countries would allow the cartel to inflict potentially large short-run economic costs on targeted importers, without itself experiencing any displacement of productive resources. Between these two extremes, the cartel's scope for restricting trade will depend on a variety of factors, including the elasticity of demand for imports, the willingness of cartel members to bear displacement costs as well as other factors affecting the group's cohesiveness in implementing sanctions. We now turn to a discussion of these implementation problems.

Implementation Problems

The preceding discussion of oligopoly power in a political export cartel was cast in terms of potential power because it was assumed that Western exporters operate as a cohesive and stable group. In practice, the effective exercise of oligopoly power will often be hampered by divisive forces internal and external to the cartel which threaten its stability. Although the problems of implementing multilateral sanctions are interrelated, and frequently must be resolved simultaneously, they can be broken down conceptually as follows: (i) determining the desired level of export restrictions for the various commodities controlled by the cartel; (ii) allocating reduced exports among the cartel members and sharing the costs and benefits; (iii) detecting violators of the agreement; (iv) enforcing the agreement against violators; (v) controlling non-cartel exports, trans-shipments and the development of substitutes and alternative technologies; and (vi) responding to Comecon retaliation. In what follows, we discuss how these problems affect cartel stability and the costs of implementing effective export controls.

1. Determining the Level of Export Restrictions

The determination of feasible export restrictions must be made on a fairly detailed commodity basis, depending both on the responsiveness of import
demand facing the cartel and on its ultimate policy objectives. The size of the cartel, in terms of the number of individual countries participating and their individual shares of total world exports, is an important decision variable which influences the responsiveness of Comecon import demand and, too, the costs of maintaining a stable coalition. The larger the share of exports controlled by the cartel, the lower will be the responsiveness of import demand and the easier it is to inflict damage. On these grounds the cartel has incentives to include as many exporters as possible.

The costs of reaching a comprehensive agreement on the magnitude of export restrictions depend, though, on the number and size distribution of the participating exporters. The smaller the number of exporters in the cartel and the larger their collective share of total world exports of the commodity, the easier it will be to reach an agreement. As in any alliance which provides a collective good, it will often be difficult to induce relatively small exporters to cooperate since their individual contribution to the cartel's success will be relatively small, while they may expect to receive some economic or policy benefits whether or not they participate. Thus a political cartel is likely to be more effective if it does not need to rely on many small exporters to control a large share of total world exports.

2. Allocating Reduced Exports and Shaping Costs

The decision on the level of export restrictions is also affected by the problem of sharing the reduced level of exports and the costs (and any economic gains) of the restrictions among the individual members of the cartel. The political export cartel will generally face difficult problems in allocating reductions in exports among its members. On efficiency grounds, a reduction in exports should be shared among producers so as to equalise incremental production costs across all producers; that is, in order to maximise collective cartel profits or minimise collective losses. In practice, this would mean that high-cost and relatively inefficient producers would be allotted larger production and export reductions than lower-cost producers. In principle, following the efficiency rule will increase the resources available to compensate the high-cost producers for their disproportionate losses.

Using this rule to share production cutbacks, however, is likely to be a serious source of conflict within the cartel. Exporters with relatively high production costs will bear a disproportionate share of the cutbacks and are unlikely to accept the rule without some form of compensation. Establishing an international compensation scheme would be a potentially significant cost of maintaining collective export controls.

Moreover, the cost-equalisation rule implicitly assumes that incremental adjustment costs for resources displayed by the reduction in exports are identical for high- and low-cost producers. These adjustment costs depend on industry
characteristics (for example, productivity, labour turnover and occupational and demographic characteristics of the industry workforce), on labour-market conditions (for example, the stage of the business cycle and industry, national and local unemployment rates) and on the availability of government compensation and adjustment programmes. As a consequence, in any given industry, adjustment costs are likely to vary greatly across countries. This diversity will also cause difficulties in bargaining over the allocation of cutbacks.

Effective domestic opposition to export controls depends partly on actual adjustment costs incurred and partly, also, on the political characteristics of those affected and on the form of government. These factors also vary greatly across countries and this diversity again increases the difficulties of reaching cartel-wide agreement on an allocation scheme.

In addition to differences in production and adjustment costs, differences in the size distribution of producers can contribute to conflicts over the allocation of production quotas. As noted earlier, relatively small producers may have significantly greater bargaining power vis-a-vis larger producers, for they can often credibly threaten to stay out of the cartel unless they are given a disproportionately small share of the cutback (or a relatively large share of the economic gains, if any)."

3. Detecting Violators of the Agreement

Members of the cartel have financial incentives to circumvent the agreement by surreptitiously increasing their sales to Comecon importers. The experience with controls on East-West trade in the period since World War II suggests that even when Western governments agree on their policy goals, they often face intense pressures from domestic producers to relax export controls, especially if exporters believe their foreign competitors have been cheating.

One way to reduce domestic opposition to sanctions is to establish a mechanism for domestic compensation which would offset part or all of the net losses incurred by exporters. The larger the cartel's price (really, 'terms-of-trade') gains and the more 'equitably' they are distributed to individual countries, the easier it will be for member governments to pre-empt domestic opposition to controls. Since most governments already have systems of tax credits and unemployment programmes, the administrative costs of compensation may be fairly low, although there is likely to be considerable controversy over appropriate levels of compensation.

Individual governments may also be able to reduce domestic opposition if they can assure domestic producers that they are monitoring sales by other cartel members. To do this governments already have at their disposal fairly sophisticated monitoring and intelligence systems. There are also strategies to detect deviations of sales from assigned market shares. The fact that many of the goods likely to be controlled, such as food and high-technology products, are dif-
ferentiated and identifiable by country of origin can facilitate the process of detecting violations. The number and size distribution of exporters in the cartel also play a role in determining costs of policing. It is easier to monitor shipments and identify violations if the cartel is composed of a relatively small number of large exporters.

4. Enforcing the Agreement against Violators

The incentive for members to violate the cartel agreement depends both on the expected financial gains from undetected cheating and on the probable economic and political costs should cheating be detected and punished. The gains from unpunished violations are lower overall adjustment costs plus the profits earned by sales in excess of the cartel-imposed limits. The expected economic costs of cheating depend on how the other cartel members respond.

It will be difficult to tolerate widespread or large-scale cheating because it spells the likely demise of the cartel. The cartel has two complementary strategies to deter cheating: first, it can identify potential cheaters in advance and attempt to reduce their expected gains from cheating; and, second, it can develop contingency plans to respond quickly to serious violations, thereby reducing the expected gains and increasing the expected costs.

Potential cheats have several readily identifiable economic characteristics. They will tend to be relatively small producers of standardised goods who recognise that it is costly to monitor and detect small-scale violations, especially if the goods they sell are difficult to identify by country of origin.

The temptation to cheat also depends on the availability of excess export capacity (including stockpiles) and the costs of maintaining it. If the cartel initially allocated large cutbacks to relatively inefficient producers (that is, those characterised by high production and adjustment costs) and failed to at least partly compensate them, the temptation to cheat may be great.

The incentive to cheat can be reduced by allocating these temptable exporters relatively small production cutbacks and cost shares and relatively large shares of the benefits. This involves trading off some allocative efficiency for reduction in the costs of policing and enforcement. It is also the solution likely to emerge based on relative bargaining strengths.

The cartel should also be prepared to respond quickly to serious violations. The longer the response lag, the greater are the expected benefits of cheating and the lower are the expected costs. The cartel should engage in serious contingency planning to determine in advance how it will respond to cheating.

In an economic cartel a prime deterrent to cheating is a credible threat that the other members of the group will respond quickly by lowering their export prices
5. Controlling New Sources of Supply

If the cartel is successful in the short run in raising export prices to Comecon importers, it will create incentives for them to seek new sources of supply. Unless the cartel can control new supplies, its oligopoly power will tend to erode, in some cases very quickly.

The political cartel may have other, less self-defeating, strategies available to deal with violators. If the cartel members are economically interdependent, it may be possible to punish violators in ways which avoid or impose other trade barriers against Comecon countries. For example, members can raise tariffs or impose other trade barriers on Comecon countries, or they can also use the threat of imposing such barriers to force Comecon countries to move to new sources of supply. They can also deny cheats access to credit and technology flows and to shared productive assets like pipelines, canals or fishing grounds, and the right to bid on government contracts, including defence procurement.

From the viewpoint of the cartel's exporters, the rational strategy is to share the costs and benefits of restrictions among its members if it can also

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and forcing the cartel to engage in ructions competition. Since the purpose of the political cartel is to inflict economic damage on Comecon countries, this strategy would be self-defeating in the short run. If, however, the cartel's goal is to impose long-run damage on Comecon countries, the cartel's efforts to "insure" supply by trans-shipments against the cases members will tend to dominate. The cartel also faces the responsivity of its own members to other factors for the effects of increased supplies. The cartel can control new supplies, its oligopoly power will tend to erode, in some cases very quickly.

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allocate its members' shares of non-targeted markets. For example, the cartel can help to reduce the incentives of certain tematable members to cheat if it gives them disproportionately large shares of non-targeted importers' markets.

The cartel may have considerable economic leverage to prevent transshipments by non-targeted importers in whose favour it discriminates. Price discrimination benefits these favoured importers (prices may even be below pre-control world prices) and it may be possible to deter transshipments by threatening to deny trans-shippers the benefits of lower prices. It may pay the cartel to demonstrate its willingness to punish countries which trans-ship, by treating them as targeted importers or, if this deters others. The decision to price discriminate involves weighing the trade-offs. Discrimination may reduce the costs of imposing damage on Comecon importers, but it may also increase the costs of monitoring and enforcing the agreement.11

The development of substitutes and alternative technologies which reduce the dependence of targeted importers on cartel exports is a serious long-run problem for the cartel. It may be possible to inhibit these developments by setting cartel prices just below those which make it economically viable to develop new substitutes. Uncertainty over both the cost of developing alternatives and the expected duration of controls, too, may reduce the economic incentives for importers to search for substitutes. For the same reasons, it also will be difficult for the cartel to determine the appropriate 'limit' price with much precision. At best, the cartel can only hope to slow the erosion of its oligopoly power; it is unlikely to be able to prevent it.

In general, the costs of higher import prices to targeted opponents are the additional resources they must expend (i) to acquire higher priced imports, (ii) to use less efficient production processes, (iii) to develop costly substitutes or new technologies and (iv) to acquire controlled goods or processes illegally. All of these fall under the heading of the costs of being forced to make inefficient reallocations of resources; and the imposition of these costs is the policy instrument used to achieve Western policy objectives.

By contrast to a market-oriented economy where an increase in import prices would force a reallocation of resources from more to less efficient uses, the same price increase might have precisely the opposite effect in a centrally-planned economy. In the absence of strong economic incentives to use resources efficiently, the mere imposition of Western export controls may provoke an administrative impetus to utilise existing resources more efficiently or to exploit more efficient, but heretofore unused, substitutes or technologies. While this will take time, and may be costly in the short run, it may also result in a net long-run economic gain for Comecon countries. Hence the imposition of controls can be counter-productive to the West's ultimate policy objectives if it causes improved rather than reduced efficiency in Comecon countries. If this scenario is plausible,
the very notion of using export controls for other than symbolic purposes is irrelevant.

There is another closely related feature of centrally-planned economies which may also make the use of sanctions as an instrument of coercion irrelevant. Even if the cartel succeeds in imposing significant costs on Comecon countries, policy makers there may not conclude that these costs are unacceptable, because of several characteristics of Soviet-type non-market economies. For one thing, the absence of reliable market signals may make it difficult, for leaders in Comecon countries to evaluate, at least in the short run, the true costs of sanctions. Short-term ignorance may be bliss. Over time, both Soviet bloc planners and the public will become increasingly aware of the costs, but the West's oligopoly power is also likely to erode. The ability of Comecon countries to endure economic hardship, whether out of ignorance or determination, will play an important role in determining the effectiveness of sanctions.

Policy makers in the West may hope that, as planners and the public in the Comecon countries become aware of the true costs of sanctions, they will become increasingly unwilling to accept these costs. It is possible that, by forcing significant resource reallocations, export controls may provoke considerable domestic discontent in the East. It is also possible, however, that an outside threat like controls may be a unifying force which increases the determination of both policy makers and the public to bear costs. Even if public dissent emerges, Soviet bloc countries have proved to be very effective in repressing it. The ultimate efficacy of export sanctions against Comecon countries will depend on the costs imposed and the continued ability of these countries to reduce civilian consumption below recent levels."

6. Responding to Retaliation

The imposition of controls on exports to Comecon countries may provoke retaliation in trade as well as other arenas. This discussion focusses on trade retaliation, although other forms of retaliation could be important.

The subject of retaliation by Comecon countries to trade sanctions is at best a nebulous one because specific behavioural assumptions and detailed information are required to reach even remotely realistic conclusions. The fundamental question is this: under what circumstances will it be economically worthwhile for targeted importers to retaliate by restricting their trade with the cartel?

In general, targeted importers have greater economic incentives to retaliate, the more unresponsive is the cartel's demand for imports from targeted countries and the more flexible is their demand for imports from the cartel. In the final analysis, all we can say is that in order to determine its vulnerability to retaliation, the cartel must make the same calculations, in reverse, that it made to determine its potential oligopoly power.
SUMMARY AND CONCLUSIONS

A reasonably accurate quantitative evaluation of the potential economic costs and benefits of sanctions is an integral part of a comprehensive analysis of their efficacy. If sanctions are to serve foreign policy, military or strategic objectives, they must be carefully designed and executed to exert as much economic pressure as possible on targeted opponents, subject to the Western political cartel's willingness and ability to bear costs in pursuit of its goals. The cost-benefit framework outlined here can help to identify commodities which might be good candidates for controls and, in addition, it is a useful tool to gauge the magnitude and distribution of the costs which will be sustained by the cartel and its adversaries.

There are, however, several potential pitfalls in this kind of quantitative analysis. Although simple cost-benefit calculations can give the appearance of great accuracy, the best that can in fact be expected are reasonable ranges of estimates of the short-run damage which can be inflicted on targeted opponents and the short-run costs to the cartel. The longer-run dynamic problems of implementing sanctions - such as the erosion of the cartel's oligopoly power, potential conflicts within the cartel *et cetera* - are at least as important, but they are also much more difficult to measure.

There is also a danger that these calculations will be manipulated by opponents and proponents of sanctions to justify their positions in the debate. It is important to emphasise that simple comparisons of short-run costs and benefits cannot by themselves answer the difficult question of whether sanctions are effective in achieving their ultimate policy objectives. The ultimate efficacy of sanctions depends not just on the costs borne by both sides but also on the Soviet bloc's willingness and ability to depress civilian consumption in pursuit of other goals. This is the subject of much debate and little conclusive analysis.

In conclusion, economic warfare is too important to be left to the generals, the technocrats or the ideologues. The stakes and the risks of miscalculation involved in the decision to use economic sanctions make it imperative that policy makers have a good understanding of the major issues and problems. If the Western allies are to devise consistent and effective policy on trade, technology and financial flows to the Soviet bloc, it is vital that policy makers receive from their advisors clear answers to three difficult questions. First, can economic sanctions be used to achieve carefully defined foreign policy, military or strategic goals? Second, what kinds of economic leverage do the Western allies hold over the Soviet bloc? Third, what will it cost the West to use this leverage?

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1. The views expressed in this article are those of the authors and do not represent the opinions of the Ford Foundation or the United States Administration.
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2. The Coordinating Committee for multilateral export controls (CoCom), established in late 1949, is an informal organisation which coordinates the controls policies of Western countries over exports of products and technologies to Communist countries. Current members of CoCom are Belgium, Canada, Denmark, the Federal Republic of Germany, France, Greece, Italy, Japan, Luxembourg, the Netherlands, Norway, Portugal, Turkey, the United Kingdom and the United States.


4. For example, the European Community imposed a 25 per cent reduction on selected exports to the Soviet Union in March 1982 in response to martial law in Poland.

5. Sometimes the credible threat of sanctions can be used by itself to achieve policy objectives, with little or no economic cost to either side.

6. Exporters frequently argue that the use or threat of sanctions can adversely affect their sales to third markets, as well as to controlled markets, by creating a reputation for unreliability. The discussion in the text also applies to these cases.

7. The measurement of import dependence is fraught with conceptual and data problems, especially for the Comecon countries where domestic prices do not always reflect economic scarcity. Simple ratios of trade to gross national product (GNP) are often misleading indicators of trade 'dependence', even if they are correctly measured, because they do not reflect the ease or difficulty of rearranging domestic production and consumption in response to an increase in import prices.


9. Most of the preceding discussion assumed that, prior to the imposition of sanctions, East-West trade was conducted under fairly competitive conditions. If the Eastern countries are already exercising monopoly power, however, the imposition of Western sanctions could serve to shift prices in the cartel's favour, with little or no restriction in actual Western exports. In order to exert countervailing oligopoly power, the West would have to levy export taxes (which are illegal in the United States) or establish an international marketing organisation with the power to establish minimum selling prices. In these circumstances, the cartel might incur very low adjustment costs, but could reap potentially large price increases. Bargaining among cartel members would also be somewhat easier in this case.

10. For example, in Andrew Schmitz et al., Grain Export Cartels (Cambridge, Mass.: Ballinger, 1981) it is argued that grain trans-shipments would be fairly easy to detect (p. 126).

11. The discussion of trans-shipments in the text also applies to cases where sanctions are being considered for some, but not all, Comecon countries. Monitoring and policing costs are likely to be higher in these circumstances.


13. Much of this discussion may apply to the illegal acquisition of controlled goods and technologies. It is probably not safe to assume that the legal purchase of these items is always cheaper than their theft. Forcing the Soviet bloc to seek to acquire newly controlled goods illegally could actually lower their acquisition cost if planners initially were not 'rationally' dividing their expenditures between legal and illegal acquisition. Moreover, the imposition of controls on certain goods may simply help the Soviet bloc to realise their previously ignored strategic importance.


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