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# Chemicals from Poland

## A Tempest in a Teacup

Andrzej Olechowski

The Polish chemical industry has been the object of a disproportionately large number of antidumping cases — not because the industry dumps but because it is so easy to win an antidumping case against a socialist country's exports.

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This paper — a product of the Trade Policy Division, Country Economics Department - – is part of a larger effort in PRE to understand the economics of the emergence of "fairness" as a standard for regulating international trade, its implications for the continued openness of the international trading system, and its continued functioning as an important vehicle for development. This was funded by the research project on "Regulations Against Unfair Imports: Effects on Developing Countries" (RPO 675-52). Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Nellie Artis, room N10-013, extension 37947 (26 pages). October 1991.

In the early 1980s, the Polish chemical industry got caught up in a battle waged by the European Community's chemical industry to preserve the EC market for itself. The Polish share of that market was very small, and the performance of the Polish companies did not depend on it, so they emerged from the battle unscathed.

But an aftertaste of the experience remained. Interviews with representatives of the companies involved indicate that their recollection of the antidumping investigations is vivid. Pressed for reasons, they said that what impressed them the most about the actions was the inconvenience associated with them, the burden of preparing explanations and reports for the Polish authorities, and the international aspect of the activities.

Perhaps the most striking finding of the study is what it tells us about the business ethics implicit in antidumping regulation. This ethic stresses collective behavior and the resolution of economic questions through political negotiation and compromise. The business behavior the antidumping rules attempt to impose on is in direct conflict with the antimonopoly laws — a basic part of the business ethics of a market system — but it fits well into the business ethics of a nonmarket economy. As an interface between the two systems, the antidumping rules teach the capitalists to behave like socialists — rather than to teach the socialists to behave as capitalists. No wonder the socialists came out well.



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# Chemicals from Poland: A Tempest in a Teacup

Andrzej Olechowski

The European Community (EC) initiated a barrage of antidumping actions against chemical imports during the early 1980s, a particularly difficult period for the West European chemical industry. Exactly how many complaints were lodged is unknown since the EC does not maintain public records of antidumping complaints; what is known is that forty-nine complaints qualified for formal investigation from 1980 to 1985, for a total of 102 investigations (most involved more than one country; see table 1). The largest share of complaints were brought against the Eastern European state trading nations -- about 46 percent. Of these, 15 percent were against Polish producers. Cases against industrial country producers, by comparison, constituted 37 percent of investigations.

What accounted for the large share of complaints against producers from Poland and other Eastern European countries, whose share of the EC market was a scant 3 percent? Polish producers seem to have gotten caught up in the general frenzy of the battle waged by the EC chemical industry to preserve the EC market for itself by excluding foreign competition large or small. Polish producers, like those in other Eastern European countries, were an easy target; export volume was largely a matter of the surplus over domestic consumption and was fairly insensitive to short-run variations in export prices. So Eastern European producers could generally be counted on to accept price undertakings. The EC antidumping actions had very little effect on the Polish chemical industry. The affected trade -- less than $7 million -- accounted for less than 0.1 percent of total production, less than 0.6 percent of total exports, and a little over 1 percent of exports in convertible currencies.

**The Polish chemical industry**

The chemical industry in Poland dates back to salt mining operations south of Cracow in the fifteenth century. The beginning of the modern chemical industry can be traced back to the early 1920s, after the formation of the new Polish state. Under the leadership of the chemical engineer-statesman Ignacy Moscicki, the huge complex at Tarnow in southeastern Poland was completed in 1927, placing Poland among the modern industrial nations. The industry expanded rapidly during World War II, when Polish plants were used for wartime production under German occupation. The plants were heavily bombed during the war. Some of the equipment that survived was taken to Germany by retreating forces, and the rest was later removed by the Soviet Union as war reparations. As a result, the Polish chemical industry had to be almost entirely rebuilt after the war.

The new plants were designed, constructed, and equipped by local engineers and workers using mostly local technology. Production was geared toward domestically available raw materials. Until the 1960s, efforts concentrated on getting the new units operating. Very little expansion occurred. Then in 1964, the first major complex was initiated at Plock. The Plock complex was followed by another at Wloclawek in the late 1960s, one in Pulawy in 1970, and the modern plant at Police in the mid-1970s. (For more detail, see World Bank 1987).

After a period of rapid growth from 1970 to 1980, production stagnated, despite a chronic inability to meet domestic demand, because of shortages of materials and a slowdown in investment. The industry suffered from a high degree of product imbalance.[1] Too much emphasis went to inorganic chemicals and those derived from coal and not enough to organic chemicals, especially petrochemicals.[2] Other problems included lack of specialization, poor financial management, weak marketing, overemployment, and high levels of pollution and worker health hazards.

In 1987, the Polish chemical industry consisted of some 600 enterprises employing about 300,000 workers and producing goods worth about $10 billion. Parts of the industry operated at world-class levels of efficiency, while others lagged behind, struggling with antiquated plants and obsolete technology. The top twenty-five enterprises, employing about 116,000 workers, had combined sales of some $5.8 billion in 1985. To put this productivity figure in perspective, consider that Dow Chemical of the United States had sales of $11.1 billion in 1986 produced by 51,300 employees, while the large Dutch chemical and energy company DSM was even more productive, with 28,000 workers and sales of $10 billion in 1986. Although these figures are not strictly comparable, they are an indication of the low output per worker in the Polish chemical industry.

Despite these shortcomings, the industry had a significant impact on the national economy. In 1985, it accounted for 9 percent of total industrial sales and 6 percent of employment (table 2). It contributed just under 4 percent of national income and absorbed just over 3 percent of national investment. Its contribution to trade was especially important, accounting for some 13 percent of imports and 10 percent of exports -- 12 percent of hard currency exports.

Unlike several other industries in Poland, such as food processing, mining, and leather and textiles, the chemical industry received no special government assistance in the 1980s. Rather, it simply experienced both the advantages and disadvantages of the centrally commanded economy: insulation from the world market, central allocation and control of prices of inputs and output, and central approval of growth and development plans and central allocation of the necessary resources.

Chemical prices, like those of other products, were of three types: administered, regulated, or contractual. Administered prices were fixed by Parliament on the recommendation of the Council of Ministers at a uniform level for a given commodity. Regulated prices were fixed at a nonuniform level set according to a cost-based formula for each producer. Contractual prices

were determined by negotiation between seller and buyer. Where administered prices would cause losses, enterprises were compensated for the difference between the price and the actual cost of production.

Table 3 gives some idea of price levels in Poland for a number of chemicals in 1985. At the official exchange rate, domestic prices for these products were in general close to their respective economic prices, with the exception of caustic soda, melamine, MDI, polypropylene, and viscose pulp, whose domestic prices were about two-thirds of their economic prices. But if prices are calculated at an indicative rate of 400 zloty (ZL) to the U.S. dollar, which is between the official rate of ZL 240/US$1 in 1987 and the free market rate of ZL 1,000/US$1, not one of these products would be priced close to it economic cost.

**Polish foreign trade policies**

Until 1982, producing enterprises in Poland could not engage in export or import transactions on their own, but had to use the services of foreign trade organizations. The foreign trade organization actually took title to the goods and resold them on world markets. The trade organizations paid producers for their goods in domestic currency and received hard currency for their export sales.

Under the reform of 1982, enterprises with qualified staff and with exports worth over ZL 1 billion or accounting for at least 25 percent of total sales could obtain a foreign trade license.[3] The reform also allowed producers more freedom in selecting a foreign trade organization. This liberalization had little effect in the chemical sector, however, since only one trade organization (Ciech) specialized in services for chemicals (Parkola and Rapacki 1986, 13). But chemical producers did gain greater influence over export activities through another provision of the reform that permitted foreign trade organizations to form joint stock companies, and industrial and foreign companies to become shareholders. Ciech was transformed into a joint

stock company, which gave producers some influence over its strategy and operations.

Licenses were need to export or import a product. The objective of export licensing was to protect supply for the domestic market and to avoid "cutthroat price competition among Polish enterprises in export markets" (Soldaczuk 1984, 11). Exports were allowed only when the licensing authorities (the ministry of foreign trade and the planning commission) were assured that domestic needs were adequately covered. Given this system and Poland's low share in international trade (less than 1 percent of total world exports, and about 0.5 percent of world chemical exports), and thus the large, elastic demand for Polish goods, foreign trade organizations were constantly searching for products to sell abroad. Import licenses (open, general, and specific) were retained for balance of payments reasons.

Market strategy, pricing, and actual trade transactions were the responsibility of the foreign trade organization, and in the transactions it handled, there was no direct connection between buyer and seller in a financial or commercial sense. Foreign trade organizations set export prices at the level needed to make a sale. Although they tried to get the best prices they could, they had a tendency to undercut the market to gain entrance -- a normal trading practice given Poland's minor position in most markets. As in domestic sales, producers were paid administered, regulated, or contractual prices. Administered and regulated prices applied to raw materials and semifinished products and accounted for some 40 to 45 percent of exports and imports. An equalization account was established to collect taxes on products for which the administered import prices were lower than domestic prices and to pay subsidies on products for which administered export prices were lower than the domestic prices.

Another important reform in 1982 gave exporters (initially traders, later producers as well) "retention quotas" or entitlements to purchase foreign exchange up to a fixed percentage of their past export earnings. This right to repurchase -- and later to retain -- a part of export earnings proved

to be an effective export incentive. Imports financed from firms' own foreign exchange accounts increased rapidly from 3 percent in 1982 to 15 percent in 1985 and more than 50 percent in 1989, when the system expired with the introduction of limited convertibility for the zloty. Exporting producers were also eligible for reductions in income and "excess wage" taxes. (The excess wage tax was part of the government's effort to control the growth of wages, particularly in the late 1980s.) A system of special export bonuses was also established. Bonuses, granted by the ministry of foreign trade, were exempt from income and wage taxes and were available only to producers that did not benefit from government subsidies, that is, those whose export prices were "effective" -- higher than cost and higher than corresponding domestic prices.

Foreign exchange for imports was centrally allocated at the official exchange rate, although allocation became less important once retention quotas were introduced. The planning commission or, after 1984, the ministry of foreign trade reviewed import plans and requests to purchase foreign currency. All transactions were carried out at the official exchange rate, set periodically by the National Bank of Poland (central bank). The reform plan provided for a "submarginal" exchange rate, a rate that would secure the profitability of 75-85 percent of hard currency exports. But only on one or two occasions did the actual rate conform with this target. Because of the fear of increasing inflation, the zloty was kept overvalued throughout the 1980s, except for two short periods following devaluations in 1982 and 1986.

**Antidumping actions of the European Community**

In the 1980s, the European Community (EC) initiated a series of antidumping actions against chemical imports. The Conseil Europeen des Federation de l'Industrie Chimique (CEFIC), "one of Europe's most effective industrial lobby groups" (Cookson 1990), acting "on behalf of Community producers representing" either "the whole" or "the bulk of Community production of the product in question" introduced a number of complaints

against chemical imports.[4] Exactly how many, we do not know. EC procedures (see Eymann and Schuknecht, PRE WPS, forthcoming) require that member states be consulted before a formal investigation is initiated, and there is no published record of complaints that do not pass this political test. What we do know is that in the period 1980-85, forty-nine complaints against narrowly defined chemical imports qualified for formal investigation (table 1).[5]

Almost all of these petitions alleged dumping by exporters from more than one country; overall, 102 investigations were initiated. Of these, 53 concerned organic chemicals, 27 inorganic chemicals, 12 plastic materials, and 10 other types of chemical products. The greatest number of complaints for a single country were lodged against U.S. firms (17 cases), particularly for organic chemical exports. As a group, the Eastern European state trading nations were subject to the greatest number of complaints. Eastern European firms were named in 48 cases; of these, 21 concerned organic chemicals (40 percent of all organic chemical cases), 14 inorganic chemicals (52 percent), and 9 plastics (75 percent). Industrial country exporters were cited in 36 cases, and developing country exporters (including China and Yugoslavia) in 18.

*Reasons for antidumping complaints*

Why the rash of complaints against chemical imports in the early 1980s? To begin with, 1980-82 was a difficult time for the Western European chemical industry. Output stagnated in 1980 and 1981 and dropped in 1982,[6] domestic prices were weak (CEFIC), and debt in the industry was high. Large European companies, many in business since the nineteenth century and joined in close but informal relationships that "would today be regarded as an illegal cartel" (Cookson 1990), competed fiercely with foreign producers. They used antidumping procedures to keep out suppliers who threatened their market-sharing and price-setting practices.

This motive is well documented in Messerlin's investigation (1989) of the relationship between antidumping and antitrust cases in the EC. In the

antitrust cases against chemical firms, the EC Commission found that industry agreements existed that had "as their object or effect the prevention, restriction, or distortion of competition within the common market" (Article 85:1 of the EC Treaty). Many other EC industries that were accused of antitrust activities were involved in the antidumping complaints as well. Examples include EC producers of low-density polyethylene (antidumping cases were brought against Czechoslovakia, East Germany, Poland, and the Soviet Union, among others), polyvinyl chloride (Czechoslovakia, East Germany, Hungary, and Romania were among the accused), and soda ash (Bulgaria, East Germany, Poland, Romania, and the Soviet Union). Collusion could have been involved among EC producer of other products as well, for which antitrust investigations had not yet been launched.

Messerlin (1989, 12) and other studies (UNCTAD 1982) also show that EC producers might have tried to use antidumping complaints to temporarily affect prices. The announcement of an investigation has a "freezing" effect on falling prices (as in the case of low-density polyethylene and polyvinyl chloride). The prices remain stable for the period of investigation and then increase sharply if the case is "positively" resolved and protective measures are imposed. Several empirical studies of antidumping measures have documented their more frequent use in combating low-price imports than lower-export-than-home-price imports.[7]

These two motives well explain the large number of complaints lodged overall by the EC chemical industry, as well as a number of cases against its largest competitor, the U.S. industry. In their struggle against low-price imports, European companies used all the weapons at their disposal, including antidumping complaints. But what explains the large number of complaints against producers from Eastern Europe, which accounted for a very small percentage of the EC market and did not exercise any significant competitive pressures?[8]

The answer is straightforward: because it was easy! It is easy -- both politically and technically -- to make a case against a socialist country.

And, for both ethical and venal reasons, socialist exporters will be inclined to go along rather than to strenuously resist.

As to the political dimension, it was easy to get the EC Commission to act against exporters from state trading countries. These are communist countries, and who likes communists?

In cases such as these, characterized by little threat that higher export prices would bring forward a significant increase of exports, the EC tends to offer a minimum price agreement (an "undertaking") as remedy. Against more dynamic exporters, particularly Japan and Korea, the EC has come increasingly to refuse price undertakings and to impose antidumping duties instead.[9] A price undertaking is a money-making outcome for the exporter, particularly one for whom the alternative of larger volume at lower prices is not available.

On a technical level, antidumping cases against socialist countries certainly bear out a premise stated in the preface: dumping is whatever you can get the government to act against under the antidumping laws. An important feature of the EC trade regime is that it distinguishes between different import sectors: different product categories and different origins of imports and, in some cases, different importing regions. Imports from state trading countries and China constitute a special case and are subject to separate legislation. Several of these countries are not members of the GATT. For those that are, the terms of accession provide for gradual elimination of (numerous) bilateral restrictions. In conflict with the GATT, the EC continues to maintain a large number of such restrictions, which explains the existence of separate regulations. Procedures in EC (and in other countries') antidumping cases offer a special methodology for establishing dumping in the case of nonmarket economies, where costs and prices are massively distorted.

To establish normal values for sales from these markets, a similar country is selected as a reference market for cost and other data. The choice of a reference market, while nominally based on similarity with the home market of accused firms, is to a large extent arbitrary and open to influence

by the petitioner (Messerlin 1989, 17-20). In the low-density polyethylene and polyvinyl chloride antidumping cases, Sweden was selected as the reference market even though the antitrust cases had found the cartels to be particularly powerful in Sweden and Swedish prices to be "the highest possible prices of reference." Similarly, in the sodium carbonate case, Austria was selected despite objections by accused exporters that Austria was a highly protected market that was monopolized by the Belgian compar Solvay, the main petitioner in the antidumping case. The EC Commission acknowledged these reservations in its review of the case in 1989, admitting that Austria was not a proper reference country because "its only producer was protected by price controls and a system of import licensing which kept prices on the domestic market high" (*Official Journal of the European Communities* 1989, L 131).

And finally, the defense put up by Eastern European producers could be counted on to be of deplorable quality -- and so to be unconvincing. True to form, the presentations made by the Polish producers in the cases reviewed for this paper were weak in both form and substance (particularly where knowledge of market conditions and rules was necessary). Indicative of their quality is the following excerpt from a *pro memoria* sent by a Polish chemical producer to the EC Commission:

> Summing up the above, we must state that Poland -- despite the relatively low costs of production of [the product] -- has never conducted the selling policy which -- according to Article VI GATT -- would be considered as dumping and causing injury to the producers in EC area. The Article VI says that the subject of dumping is the product sold in another country at lower value than its normal one. That is why we would suggest to:
>
> 1. cancel a provisional antidumping duty imposed on [the product] originating in Poland;
> 2. repay the duty covered by us;
> 3. in order to eliminate unnecessary competition, causing losses to the producers in EC area and Poland, we engage

ourselves to sell [the product] to EC market at prices not lower than those quoted in the undertaking attached hereto.

It is no wonder that the EC investigators were inclined to share the petitioners' arguments -- they were more elegant, better documented, and in understandable English.

The eagerness of Eastern European exporters to accept price undertakings came in part, but only in part, from their unfamiliarity with antidumping procedures. At least as important were the business ethic of socialist managers and the system of accountability within which they worked, which motivated them toward the outcome that the antidumping system generates.

The first dimension of control of enterprise managers -- and therefore their first concern -- is their accountability to higher authorities: not their profit and loss statement. In a socialist economy the *planning process*, not the interaction of market forces, determines what will be done and who will do it. The responsibility of managers is to carry out the plan as smoothly as possible. An antidumping action -- particularly one that ended with a penalty duty -- would be interpreted as poor execution. (Because of the political sensitivity of trade with the West, diplomatic conduct would be a particularly important dimension.) In the commercial ethic of the socialist system, the appropriate way to resolve a problem created when one enterprise attempts to move into another's market is to negotiate, to find a way to accommodate all interests. The system functions through economic adjustments decided through political mechanisms, not through market forces. Within this system, an antidumping duty would be interpreted as a failure to negotiate an outcome that accommodates all interests. An undertaking, on the other hand, is compatible with the commercial ethic of the system. It is also compatible with socialist procedures for determining what economic adjustments will be made. It is the way of doing business in a managed, nonmarket economy.

Whatever the motives for the petitions, their success rate was high. Of the total of 102 cases initiated, only 20 resulted in findings of no injury or no dumping. Duties were imposed in 33 cases and price undertakings were

accepted in 49 cases. Success came even easier in the cases involving the state trading countries (including China) -- 85 percent of cases ended with a finding of dumping and injury, and 60 percent were resolved through price undertakings. And the duties imposed were quite hefty, averaging 15.8 percent. The ad valorem equivalent of the price undertakings was probably close to that rate as well.

*The cases against imports from Poland*

Seven cases involved chemical exports from Poland, which also constituted a major part of all EC antidumping actions against Poland in the 1980s.[10] Six cases resulted in a finding of dumping and injury; five of them ended in price undertakings. The seven cases involved nine Polish companies -- seven producing enterprises and two foreign trade organizations (the affected products are in parentheses):

- Zaklady Chemiczne Oswiecim (trichloretylene), the third largest chemical enterprise in Poland with 7,370 employees and sales in 1985 of about $238 million.
- Mazowieckie Zaklady Rafineryjne i Petrochemiczne "Plock" (polyethylene), the largest chemical producer in Poland with 8,500 employees and sales in 1985 of more than $2 billion.
- Huta Miedzi Legnica (copper sulphate), a copper mining company.
- Zaklady Chemiczne Tarnowskie Gory (copper sulphate), a chemical producer with 824 employees and sales in 1985 of about $20 million.
- Fabryka Materialow i Wyrobow Sciernych (silicon carbide and artificial corundum), a producer of abrasives.
- Inowroclawskie Zaklady Chemiczne im. B. Ruminskiego (sodium carbonate), with 2,520 employees and sales in 1985 of about $50 million.
- Janikowskie Zaklady Sodowe (sodium carbonate), a medium-size enterprise with 1,990 employees and sales of about $50 million in 1985.
- Inter-Vis (silicon carbide and artificial corundum), a foreign trade organization.

- Ciech Import and Export of Chemicals Ltd (remaining products), a foreign trade organization established in 1945 in Warsaw. The second largest Polish foreign trader, it had 1,100 employees in 1986 and turnover was about $7 billion, of which exports to the West amounted to about $700 million and imports from the West $1.3 billion.

**Effects of the antidumping actions**

Taking into account the conditions under which Polish producers and exporters of chemical products operated in the 1980s, three possible conclusions about the effects of the antidumping actions emerge:

- The export policies of producing enterprises could not have been affected because they did not exist. Polish production enterprises had no control over the direction or prices of their exports. Until about 1985, they were only moderately interested in exporting because the quality requirements were high and benefits were modest. That attitude changed when eligibility for the retention of foreign exchange earnings was widened and the rules governing their use were relaxed.

- Production (and incomes) could have suffered, but only in the case of enterprises that exported a significant share of their production to EC markets and that faced low domestic demand. Most enterprises should have had no difficulty finding customers on short notice for shipments that suddenly became available, given the small value of exports affected, their small share in total industry sales (about 15 percent, less than half of it directed to EC markets), and persistent shortages of production inputs (and other products) in the economy.

- For the same reasons, the foreign trade organizations should have had no difficulty finding alternative markets, although they might have suffered short-term drops in exports. Obviously, exports to the EC would have been permanently damaged.

Information and comments obtained from company representatives appear to confirm these conclusions. Before presenting that information, however, it is necessary to warn the reader about its low quality. Polish companies keep poor records, and company memories were seriously disrupted by the recent radical changes in management. No data were obtained from Oswiecim (producer of trichloretylene), and the information from other companies was often incomplete. There were no other sources of data to fill in the gaps.

First, company statistics do not indicate that intentional dumping occurred. As a rule, export prices were higher than domestic prices. There were three exceptions. One was sodium carbonate; export prices received by Janikowo in 1984 were some 19 percent lower than those received for domestic sales, while for Inowroclaw in the period 1982-85, the difference averaged about 33 percent (note, however, that the antidumping case was initiated in 1982). According to both producers, the price differential resulted because of the low, regulated COMECON prices. The losses were made good through subsidies. For Janikowo, subsidies amounted to almost 56 percent of export revenue; for Inowroclaw, they amounted to 5.3 percent in 1982, 14.7 percent in 1983, 13.3 percent in 1984, and 8.9 percent in 1985. The second case is that of copper sulphate, for which export prices were below domestic prices in 1984. In the third case, silicon carbide, export prices were lower than domestic prices in 1985 and 1986. In neither case did producers receive subsidies to cover any of their losses.

Second, all the producing companies claimed that the EC actions had no significant impact on their performance either at the time the actions were taken or later and, therefore, that they made no adjustments in production and price policies or structure. This claim is supported by data on production output in the year of initiation of the action and in the three preceding and three following years for four companies that provided full information (table 4). In all four enterprises, output was larger in each of the years following the year of initiation than in the year of initiation or in the preceding period. Clearly, the antidumping actions did not disrupt total production,

which grew steadily during the investigations and after the imposition of import-restricting measures.

Similarly, the volume of total exports was not affected (table 5). Only the drop in the total volume of trichloretylene and sodium carbonate exports in the year of initiation and of trichloretylene in the first year following initiation could have resulted from the EC antidumping actions. In all other cases, exports do not appear to have been affected by the antidumping actions. As would be expected, however, the volume of exports to the EC suffered considerably (table 6). On average they declined some 32 percent in the year of the initiation, falling another 20 percent in the following year. The initial drop was due mostly to a very large decrease in sodium carbonate exports; the decline in the following year (that is, the first year in which the import-restricting measures had their full impact) affected all exports. The import-restricting measures imposed on three products proved to be relatively soft, since export volumes returned to their previous levels and continued to grow. In the case of artificial corundum and polyethylene, however, damage was more severe, and export volumes continued to fall into the third year after the initiation.

Finally, the prices producers received for their exports may have been affected by the antidumping actions. The export prices of products for which price undertakings were accepted increased and kept on growing in the following years (table 7). In the case of sodium carbonate (Inowroclaw), however, on which an antidumping duty was imposed, the prices received by producers fell and stayed at a lower level than before the antidumping action. This difference may indicate that antidumping actions had some influence on export price -- foreign trade organizations might have raised their prices for exports to other markets (including the COMECON countries, where prices were negotiated on the basis of "world" prices) up to the EC levels. However, the importance of the antidumping actions in this process could not have been large, since world chemical prices increased quite strongly in the first half of the 1980s. For example, they increased by more than 50 percent in Denmark,

Italy, and Sweden; by 32 percent in Australia; by 22 percent in Germany (the largest export market for Polish producers); and by 16 percent in the United States (CEFIC).

In conclusion, the EC antidumping actions seem to have had very little effect on the Polish chemical industry. They did not affect the performance of the industry as a whole or that of individual producing enterprises. They did not have any impact on total exports of the products involved, but they might have affected export prices to some degree. Only in the geographic composition of exports was the impact statistically significant: faced with new obstacles to the EC market, exporting companies had to find alternative customers -- and they did so in a very short time (apparently in the Middle and Far East markets). Since the value of trade involved in these cases was so small, the importance of this alteration for Polish trade relations with the EC was negligible.

**A final comment**

All in all, a tempest in a teacup? Apparently so. The Polish chemical industry got caught up in a battle waged by the EC chemical industry to preserve the EC market for itself. Since the Polish share of that market was very small, and since the performance of the Polish companies did not depend on it, they emerged for the battle unscathed. However, an aftertaste of the experience remained: interviews with representatives of the companies involved indicate that their recollection of the antidumping investigations is very vivid. When pressed for reasons, they say that what impressed them the most about these actions was the inconvenience associated with them, the burden of preparing explanations and reports for the Polish authorities, and the international aspect of the activities.

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**Table 1 European Community antidumping cases in the chemical sector, 1980-85**

| | Product | Country | Initiation | | Outcome | | |
|---|---|---|---|---|---|---|---|
| | | | Off Jour C | Date | Type | Off Jour L | Date |
| 1 | Chemical fertilizers | United States | 47 | 2/1980 | Duty | 39 | 2/1981 |
| 2 | Vinyl acetate monomer | United States | 169 | 7/1980 | Duty | 129 | 5/1981 |
| 3 | Lithium hydroxide | Soviet Union | 181 | 7/1980 | Duty | 228 | 8/1980 |
| 4 | Styrene monomer | United States | 189 | 7/1980 | Duty | 154 | 6/1981 |
| 5 | Gelatine | Sweden | 219 | 8/1980 | No dumping | 320 | 11/1980 |
| 6 | Furfural | Dominican Republic | 219 | 8/1980 | No dumping | 189 | 7/1981 |
| | | Spain | 219 | 8/1980 | No injury | 189 | 7/1981 |
| | | China | 219 | 8/1980 | No injury | 189 | 7/1981 |
| 7 | Orthoxylene | Puerto Rico | 286 | 11/1980 | Duty | 270 | 9/1981 |
| | | United States | 286 | 11/1980 | Duty | 270 | 9/1981 |
| 8 | Paraxylene | United States | 286 | 11/1980 | Duty | 296 | 10/1981 |
| | | Virgin Island | 286 | 11/1980 | Duty | 296 | 10/1981 |
| | | Puerto Rico | 286 | 11/1980 | Duty | 296 | 10/1981 |
| 9 | Phenol | United States | 51 | 3/1981 | Duty | 12 | 1/1982 |
| 10 | Codeine | Czechoslovakia | 71 | 4/1981 | No injury | 16 | 1/1983 |
| | | Hungary | 71 | 4/1981 | No injury | 16 | 1/1983 |
| | | **Poland** | **71** | **4/1981** | **No injury** | **16** | **1/1983** |
| | | Yugoslavia | 71 | 4/1981 | No injury | 16 | 1/1983 |
| 11 | Polypropylene film | Japan | 155 | 6/1981 | Undertaking | 172 | 6/1982 |
| 12 | Oxalic acid | China | 241 | 9/1981 | Duty | 148 | 5/1982 |
| | | Czechoslovakia | 241 | 9/1981 | Duty | 148 | 5/1982 |
| | | German Dem Rep | 241 | 9/1981 | No injury | 148 | 5/1982 |
| | | Hungary | 241 | 9/1981 | No injury | 148 | 5/1982 |
| 13 | Trichloretylene | Czechoslovakia | 271 | 10/1981 | No dumping | 223 | 7/1982 |
| | | German Dem Rep | 271 | 10/1981 | Undertaking | 308 | 1/1982 |
| | | **Poland** | **271** | **10/1981** | **Undertaking** | **308** | **11/1982** |
| | | Romania | 271 | 10/1981 | Undertaking | 308 | 11/1982 |
| | | Spain | 271 | 10/1981 | Undertaking | 308 | 11/1982 |
| | | United States | 271 | 10/1981 | Undertaking | 308 | 11/1982 |
| 14 | Polyvinylchloride | Czechoslovakia | 332 | 12/1981 | Undertaking | 18 | 1/1983 |
| | | German Dem Rep | 332 | 12/1981 | Undertaking | 274 | 9/1982 |
| | | Hungary | 332 | 12/1981 | Undertaking | 274 | 9/1982 |
| | | Romania | 332 | 12/1981 | Undertaking | 274 | 9/1982 |

**Table 1 European Community antidumping cases in the chemical sector, 1980-85** (cont.)

| | Product | Country | Initiation | | Outcome | | |
|---|---|---|---|---|---|---|---|
| | | | Off Jour C | Date | Type | Off Jour L | Date |
| 15 | Decambromodiphenylether | United States | 337 | 12/1981 | Undertaking | 319 | 11/1982 |
| 16 | Peracetamol | China | 337 | 12/1981 | Undertaking | 236 | 8/1982 |
| 17 | Methylamines | German Dem Rep | 79 | 3/1982 | Duty | 348 | 11/1982 |
| | | Romania | 79 | 3/1982 | Undertaking | 238 | 8/1982 |
| 18 | Acrylonitrile | United States | 84 | 4/1982 | No injury | 101 | 4/1983 |
| 19 | Bisphenol | United States | 93 | 4/1982 | Duty | 199 | 7/1983 |
| 20 | Light sodium carbonate | Bulgaria | 93 | 4/1982 | Duty | 32 | 2/1983 |
| | | German Dem Rep | 93 | 4/1982 | Duty | 32 | 2/1983 |
| | | **Poland** | **93** | **4/1982** | **Duty** | **32** | **2/1983** |
| | | Romania | 93 | 4/1982 | Duty | 32 | 2/1983 |
| | | Soviet Union | 93 | 4/1982 | Duty | 32 | 2/1983 |
| 21 | Thiophen | United States | 122 | 5/1982 | Undertaking | 295 | 10/1982 |
| 22 | Perchlorethylene | Czechoslovakia | 133 | 5/1982 | Undertaking | 371 | 12/1982 |
| | | Romania | 133 | 5/1982 | Undertaking | 371 | 12/1982 |
| | | Spain | 133 | 5/1982 | Undertaking | 371 | 12/1982 |
| | | United States | 133 | 5/1982 | Undertaking | 371 | 12/1982 |
| 23 | Sodium carbonate | United States | 147 | 6/1982 | Duty | 64 | 3/1983 |
| 24 | Copper sulphate | Yugoslavia | 161 | 6/1982 | Duty | 55 | 3/1983 |
| 25 | Urea | United States | 179 | 7/1982 | Undertaking | 211 | 8/1983 |
| 26 | Barium chloride | China | 207 | 8/1982 | Duty | 228 | 8/1983 |
| | | German Dem Rep | 207 | 8/1982 | Duty | 228 | 8/1983 |
| 27 | Methenamine | Czechoslovakia | 211 | 8/1982 | Undertaking | 40 | 2/1983 |
| | | German Dem Rep | 211 | 8/1982 | Duty | 151 | 6/1983 |
| | | Romania | 211 | 8/1982 | Undertaking | 40 | 2/1983 |
| | | Soviet Union | 211 | 8/1982 | Duty | 151 | 6/1983 |
| 28 | Polyethylene | Czechoslovakia | 230 | 9/1982 | Undertaking | 138 | 5/1983 |
| | | German Dem Rep | 230 | 9/1982 | Undertaking | 138 | 5/1983 |
| | | **Poland** | **230** | **9/1982** | **Undertaking** | **138** | **5/1983** |
| | | Soviet Union | 230 | 9/1982 | Undertaking | 138 | 5/1983 |
| 29 | Xanthan gum | United States | 253 | 9/1982 | No injury | 268 | 9/1983 |

**Table 1 European Community antidumping cases in the chemical sector, 1980-85** (cont.)

| | Product | Country | Initiation | | Outcome | | |
|---|---|---|---|---|---|---|---|
| | | | Off Jour C | Date | Type | Off Jour L | Date |
| 30 | Cellulose ester resins | United States | 299 | 11/1982 | Undertaking | 106 | 4/1983 |
| 31 | Copper sulphate | Czechoslovakia | 331 | 12/1982 | Duty | 274 | 10/1983 |
| | | Soviet Union | 331 | 12/1982 | Duty | 274 | 10/1983 |
| 32 | Dicumyl peroxide | Japan | 46 | 2/1983 | Undertaking | 329 | 11/1983 |
| 33 | Lithium hydroxide | China | 98 | 4/1983 | Undertaking | 294 | 10/1983 |
| 34 | Synthetic fibre knitting yarn | Turkey | 102 | 4/1983 | Undertaking | 67 | 3/1984 |
| 35 | Choline chloride | German Dem Rep | 109 | 4/1983 | Undertaking | 117 | 5/1984 |
| | | Romania | 5 | 4/1983 | Undertaking | 117 | 5/1984 |
| 36 | Vinyl acetate monomer | Canada | 180 | 7/1983 | Duty | 170 | 6/1984 |
| 37 | Pentaerythritol | Spain | 244 | 9/1983 | Undertaking | 88 | 3/1984 |
| 38 | Artificial corundum | China | 261 | 9/1983 | Undertaking | 340 | 12/1984 |
| | | Czechoslovakia | 261 | 9/1983 | Undertaking | 340 | 12/1984 |
| | | Spain | 261 | 9/1983 | No dumping | 255 | 9/1984 |
| | | Yugoslavia | 261 | 9/1983 | No dumping | 255 | 9/1984 |
| 39 | Propan-1-ol | United States | 275 | 10/1983 | Undertaking | 106 | 4/1984 |
| 40 | Sensitized paper | Japan | 292 | 10/1983 | Undertaking | 124 | 5/1984 |
| 41 | Oxalic acid | Brazil | 67 | 3/1984 | Duty | 26 | 1/1985 |
| | | Spain | 67 | 3/1984 | No dumping | 239 | 9/1984 |
| | | German Dem Rep | 67 | 3/1984 | Undertaking | 239 | 9/1984 |
| 42 | Pentaerythritol | Canada | 72 | 3/1984 | Duty | 13 | 1/1985 |
| | | Sweden | 72 | 3/1984 | Undertaking | 254 | 9/1984 |
| 43 | Copper sulphate | Bulgaria | 90 | 3/1984 | Undertaking | 275 | 10/1984 |
| | | Hungary | 90 | 3/1984 | Undertaking | 275 | 10/1984 |
| | | **Poland** | **90** | **3/1984** | **Undertaking** | **41** | **2/1985** |
| | | Spain | 90 | 3/1984 | No dumping | 275 | 10/1984 |
| 44 | Paraformaldehyde | Spain | 145 | 6/1984 | Undertaking | 282 | 10/1984 |
| 45 | Artificial corundum | Hungary | 201 | 7/1984 | Undertaking | 340 | 12/1984 |
| | | **Poland** | **201** | **7/1984** | **Undertaking** | **340** | **12/1984** |
| | | Soviet Union | 201 | 7/1984 | Undertaking | 340 | 12/1984 |
| 46 | Silicon carbide | China | 202 | 8/1984 | Undertaking | 287 | 10/1986 |
| | | Czechoslovakia | 202 | 8/1984 | No dumping | 287 | 10/1986 |
| | | Norway | 202 | 8/1984 | Undertaking | 287 | 10/1986 |
| | | **Poland** | **202** | **8/1984** | **Undertaking** | **287** | **10/1986** |
| | | Spain | 202 | 8/1984 | Terminated | 287 | 10/1986 |
| | | Soviet Union | 202 | 8/1984 | Undertaking | 287 | 10/1986 |
| | | Yugoslavia | 202 | 8/1984 | No dumping | 287 | 10/1986 |

**Table 1 European Community antidumping cases in the chemical sector, 1980-85** (cont.)

| | Product | Country | Initiation | | Outcome | | |
|---|---|---|---|---|---|---|---|
| | | | Off Jour C | Date | Type | Off Jour L | Date |
| 47 | Polystyrene sheet | Spain | 205 | 8/1984 | Duty | 198 | 7/1985 |
| 48 | Glycine | Japan | 265 | 10/1984 | Duty | 218 | 8/1985 |
| 49 | Chromium sulphate | Yugoslavia | 276 | 10/1984 | Duty | 321 | 11/1985 |

Off Jour C or L is *Official Journal of the European Communities* series C or L.
Source: *Official Journal of the European Communities.*

**Table 2 Share of the Polish chemical industry in the national economy, 1984**
(percentages)

| *Category* | *Share* |
|---|---|
| Production | |
| Global production | 3.4 |
| Global production by industry | 8.5 |
| Sales by industry | 7.2 |
| Value added by industry | 8.2 |
| Investment | |
| Capital investment by industry | 10.4 |
| Employment | |
| Total employment | 1.7 |
| Employment in industry | 5.9 |
| Foreign Trade | |
| All imports | 13.2 |
| Hard currency imports | 23.3 |
| All exports | 10.4 |
| Hard currency exports | 11.6 |

Source: *Rocznik Statystyczny* (*Annual Yearbook*) 1986.

**Table 3 Financial and economic prices for selected chemical products in Poland, 1985**

| *Product* | *(1) Domestic price (US$/ton)* | *(2) Economic price (US$/ton)* | *Ratio (1)/(2) at 240 ZL/$(%)* | *Ratio (1)/(2) at 400 ZL/$(%)* |
|---|---|---|---|---|
| Ammonia | 103 | 105 | 98 | 59 |
| Antiline | 700 | 680 | 103 | 62 |
| BOPP | 1,875 | 2,500 | 75 | 45 |
| Caustic soda | 76 | 120 | 63 | 38 |
| Hexane | 158 | 158 | 100 | 60 |
| High wet modulus viscous fiber | 1,400 | 1,200 | 117 | 70 |
| MDI/PMDI (15/85) | 1,638 | 2,120 | 77 | 46 |
| Melamine | 600 | 1,000 | 60 | 36 |
| Methanol | 154 | 154 | 100 | 60 |
| MTBE | 202 | 202 | 100 | 60 |
| Polinosic viscose fiber | 1,300 | 1,300 | 100 | 60 |
| Polypropylene | 530 | 800 | 66 | 40 |
| Propylene | 245 | 245 | 100 | 60 |
| Sulfuric acid | 31 | 31 | 100 | 60 |
| Urea | 105 | 100 | 105 | 63 |

Column notes: (1) Exchange rate: US$1 = ZL 240; (2) economic prices are border prices adjusted for internal transport based on f.o.b. Western Europe prices for exports of chemical products.
Source: World Bank 1987.

**Table 4 Evolution of total production (volume) for four Polish firms before and after antidumping action**
(percentage of production in year of initiation of antidumping action)

| *Year* | *Tarnowskie Gory* | *Huta Legnica* | *Inowro-ciaw* | *Plock* | *Average* |
|---|---|---|---|---|---|
| -3 | 0.79 | 0.65 | 0.69 | 0.28 | 0.60 |
| -2 | 1.04 | 0.77 | 1.03 | 0.91 | 0.94 |
| -1 | 0.40 | 0.75 | 1.01 | 0.89 | 0.76 |
| Action | 1 | 1 | 1 | 1 | 1 |
| +1 | 1.17 | 1.14 | 1.23 | 1.09 | 1.16 |
| +2 | 1.21 | 1.21 | 1.50 | 1.18 | 1.28 |
| +3 | 1.26 | 1.25 | 1.57 | 1.19 | 1.32 |

Source: Information provided by Polish firms.

**Table 5 Evolution of total chemical exports (volume) before and after antidumping action**
(percentage of exports in year of initiation of antidumping action)

| *Year* | *Trichloretylene* | *Silicon carbide* | *Artificial corundum* | *Copper sulphate* | *Sodium carbonate* | *Polyethylene* | *Average* |
|---|---|---|---|---|---|---|---|
| -3 | 1.35 | na | na | na | na | na | 1.35 |
| -2 | 1.36 | na | na | na | 1.26 | na | 1.31 |
| -1 | 1.33 | na | na | 0.63 | 1.16 | 0.83 | 0.99 |
| Action | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| +1 | 0.91 | 1.07 | na | 1.44 | 1.50 | 1.05 | 1.19 |
| +2 | 1.27 | 0.91 | na | 1.27 | 3.02 | 1.14 | 1.52 |
| +3 | 1.39 | 0.97 | na | 1.34 | 2.91 | 1.05 | 1.53 |

Source: Information provided by Polish firms.

**Table 6 Evolution of chemical exports (volume) to EC markets before and after antidumping action**
(percentage of exports in year of initiation of antidumping action)

| *Year* | *Trichloretylene* | *Silicon carbide* | *Artificial corundum* | *Copper sulphate* | *Sodium carbonate* | *Polyethylene* | *Average* |
|---|---|---|---|---|---|---|---|
| -3 | 0.95 | 2.33 | 0.17 | na | na | na | 1.15 |
| -2 | 1.57 | 1.88 | 0.15 | na | 4.24 | na | 1.96 |
| -1 | 0.98 | 1.06 | 0.33 | 0.63 | 3.85 | 1.09 | 1.32 |
| Action | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| +1 | 0.48 | 0.90 | 0.98 | 0.94 | 0.78 | 0.73 | 0.80 |
| +2 | 0.68 | 0.84 | 0.55 | 1.30 | 1.10 | 0.45 | 0.82 |
| +3 | 0.85 | 1.02 | 0.53 | 1.03 | 1.28 | 0.40 | 0.85 |

Source: Information provided by Polish firms.

**Table 7 Evolution of export prices (in U.S. dollars) received by chemical producers before and after antidumping action**
(percentage of prices in year of initiation of antidumping action)

| *Year* | *Tarnowskie Gory* (copper sulfate) | *Huta Legnica* (copper sulfate) | *Inowro-claw* (sodium carbonate) | *Plock* (polyethylene) | *Average* |
|---|---|---|---|---|---|
| -3 | 0.77 | na | 0.97 | na | 0.87 |
| -2 | 1.11 | na | 1.28 | 1.51 | 1.30 |
| -1 | 1.13 | 1.00 | 0.74 | 0.78 | 0.92 |
| Action | 1 | 1 | 1 | 1 | 1 |
| +1 | 1.07 | 1.04 | 0.97 | 1.03 | 1.03 |
| +2 | 1.06 | 0.98 | 0.94 | 1.29 | 1.07 |
| +3 | 1.28 | 1.13 | 0.99 | 1.10 | 1.12 |

## Notes

1. The chemical industry in Poland is defined to include not only the usual processing of raw materials into intermediate chemicals, fertilizers, and pharmaceuticals, but also the refining of crude oil, the mining of chemical raw materials, the manufacture of consumer goods, and wholesale and retail trading.

2. For example, in 1984 Poland was the world's third largest producer (in terms of tonnage of output) of acetylene and naphthalene and fourth largest in sulfur, carbide, and nitric acid, but only the twelfth largest in polystyrene, synthetic rubber, and artificial fibers, fourteenth largest in plastics, and fifteenth largest in polyvinylchloride (PRC 1986, 131-33 and 139-70).

3. The reform was a result of the social unrest in 1980 and the emergence of the "Solidarnosc" trade union. It was based on the principles of independence, self-financing, and self-government of enterprises. The number of licensed foreign traders increased from 109 in 1982 to 232 in 1983, 289 in 1984, and 361 in 1985.

4. CEFIC, the European Chemical Industry Federation, is the Brussels-based organization representing fifteen National Chemical Federations of Western Europe. Most of the major chemical companies with headquarters in Europe are corporate associate members.

5. Only products classified in CCNN chapters 28 to 40 were included. That means that several products of chemical origin, such as artificial and synthetic fibers, were excluded.

6. After 1982, however, chemical production grew rapidly: 15 percent during 1983-86, 1 percent in 1986, 3.9 percent in 1987, 6.7 percent in 1988, and 3.4 percent in 1989.

7. See, for example, the recommendation in a report on the Australia's system (Gruen 1986, iv) to "reduce the discrepancy between the concept of 'unfair trading practices' as it is applied within Australia and as it is applied by Australia to its imports.... [This] aim is to be achieved by returning the antidumping system to its original role of combating dumping as opposed to combating low prices."

8. The share of Eastern European exports in total EC imports of chemical products never exceeded 3 percent; their share in non-EC imports was 10 percent.

9. The point is documented in Hindley (1988, 445-64).

10. During the 1980s, eighteen antidumping investigations were initiated by the EC against Polish exporters. The antidumping actions affected chemicals (8); electric products (5); mineral products (2); and wood products, metal products, and musical instruments (one each). In fourteen of these cases, injury was found and antidumping duties were imposed (in two instances) or price undertakings were agreed on. Antidumping cases against Poland in the chemicals industry included the seven cases listed in table 10.1 and an eighth investigation, opened in 1988, against imports of methenamine from Poland, Bulgaria, Hungary, Czechoslovakia, Romania, and Yugoslavia (*Official Journal of the European Communities* C 322, 1988). It was concluded by the acceptance of price undertakings (*Official Journal of the European Communities* L 104, 1990).

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