First, price and quality are inextricably intertwined, so a minimum price for a product can be evaded by increasing the product's quality. Consequently, trigger prices must specify clearly the quality of the product. This is a complex task, as there are many aspects of quality that are not related to one another, and some qualities, such as molecular structure, hardness, tensile strength, and speciﬁc combination of properties, are not readily apparent to the consumer, making it possible to mislabel products.

Third, the true price in a transaction between related parties is difﬁcult to determine, even with full information. In 1981 there were complaints that some steel sales were at less than fair value. Apparently, many firms decided to do just that, and as shown by Exhibit A, the positive correlation between price, production costs, and quality. The evidence for the U.S. dollar lowered European production costs relative to trigger prices. It was legal to sell at less than the trigger price as long as steel was not sold at less than fair value. The Commerce Department argued that the Commerce Department could be highly proﬁtable, enabling the parent to sell its steel at a very low mark-up and obtain a larger sales volume for imported steel.

In addition to the possibilities for evasion and avoidance, the TPM was not a law. It was legal to sell at less than the trigger price as long as steel was not sold at less than fair value. Apparently, many firms decided to do just that, and as shown by Exhibit A, the positive correlation between price, production costs, and quality. The evidence for the U.S. dollar lowered European production costs relative to trigger prices. It was legal to sell at less than the trigger price as long as steel was not sold at less than fair value. The Commerce Department argued that the Commerce Department could be highly proﬁtable, enabling the parent to sell its steel at a very low mark-up and obtain a larger sales volume for imported steel.

In 1981 the Commerce Department initiated a few cases. Still dissatisfied, seven domestic ﬁrms ﬁled a record 132 anti-dumping and countervailing duty cases against producers in eleven nations on January 11, 1982.

The Commerce Department surmised that the TPM on the same day. The department often stated that it did not have the resources simultaneously to operate the TPM and investigate complaints, and that ﬁling of complaints would cause the TPM to be withdrawn. The department announced that it would devote the resources that had been involved in operating the TPM to investigation of the industry's complaints.6

Conclusion
How did the TPM fare relative to the administration's three purposes of avoiding more severe protection, aiding the domestic steel industry, and improving enforcement of the anti-dumping law? Certainly, the TPM was successful in avoiding greater protectionism in steel trade and the harm that would have accompanied it. During the TPM's four-year tenure, Congress legislated no restrictions on steel imports, anti-dumping duties to be levied on imports that are dumped—or sold at "less than fair value" in the U.S. market; foreign producers were selling steel at prices below fair value. The Commerce Department was investigating 19 separate anti-dumping complaints from the domestic steel industry, U.S. law provides for anti-dumping duties to be levied on imports that are dumped—or sold at "less than fair value" if such sales cause material injury to an U.S. industry. Fair value is the price charged in the exporter's home country. The law also provides for the imposition of countervailing duties to offset foreign subsi- dies if subsidized imports cause material injury to an U.S. industry. The TPM established reference prices for steel imports. Imports at prices below the reference price would trigger an investigation of whether imports were being dumped and whether injury was occurring. While the TPM did not change the dumping law, it did facilitate government-initiated dumping investigations. The Tariff Act of 1930 provides that an investiga- tion may be initiated by the government or by a petition from a firm or other inter- ested party. Investigations almost always resulted from petitions from ﬁrms and seldom if ever were initiated by the govern- ment. Proponents of the TPM expected that constant monitoring of import prices and foreign costs would make possible more rapid initiation and completion of investigations and, if warranted, implementa- tion of anti-dumping duties. The TPM did not remove a domestic ﬁrm's legal right to petition. This Economic Commentary sets forth the purposes of the TPM, describes its operation and economic impact, discusses the events that led to its suspension.
foreign steel. This purpose was not to investigate more quickly dumping of anti-dumping law. However, the anti-dumping import prices and lower import volume to domestic consumption and production and makes the steel industry anticipated that the TPM would raise the price of imported steel so that domestic steel producers could raise prices while increasing their market share. The steel industry chose the TPM and file complaints alleging unfair practices rather than to verify that particular practices were fair.

Economic Effects

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in January 1982. The Commentary concludes that, initially at least, the TPM was an effective protectionist device. It increased tariff imports, reduced import volumes, increased prices to domestic consumers, and reduced consumption. Oddly, the TPM made foreign producers more desirable to the nation in the sense that it foreclosed, for a time at least, the adoption of more stringent restrictions on imports that could have inflicted much greater damage on the domestic industry. This objective is true of the domestic steel industry. He compared estimates for 1979 (the first full year of operation) that the TPM raised U.S. import prices by 10.3 percent; this a 1.1 percent rise in domestic producer prices. The domestic producers probably raised their prices by much less than the import price increase, because domestic prices were already far above the significantly higher import prices for many products. The weighted average import price increased to steel users, assuming 15 percent had the market, was 2.7 percent. The relative increase in import prices operated with a lag on market share; when fully, it could reduce the import share of the market as much as 41 percent. Using more conservative estimates of the price impact of TPM, Crandall estimated that imports were reduced by 6.7 million tons in 1979; domestic shipments rose by 3.1 million tons, and domestic steel employment increased by 11,000 workers from levels that otherwise would have existed. Total consumption fell, apparently because of high prices. In the next few years, however, changes in prices and shipments were different, of course, because they were affected by new economic conditions, changes in demand, and changes in demand, as well as by the operation of the TPM.

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In January 1982, The Commentary concludes that, initially at least, the TPM was an effective protectionist device. It involves support indicators, reduced import volume, increased prices to domestic consumers, and reduced consumption. Oddly enough, the TPM may have been beneficial to the nation in the sense that it foreclosed, for a time at least, the adoption of more stringent restrictions on imports that could have inflicted much greater damage on the economy. The TPM had the following purposes:

**Chart 1** Domestic Steel Production and Steel Imports

<table>
<thead>
<tr>
<th>Year</th>
<th>Domestic Production</th>
<th>Imports</th>
<th>U.S. mill shipments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>100</td>
<td>50</td>
<td>30</td>
</tr>
<tr>
<td>1981</td>
<td>90</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>1982</td>
<td>80</td>
<td>70</td>
<td>50</td>
</tr>
</tbody>
</table>

1. Total market includes U.S. exports, which have averaged 3.2 million tons annually over the last 30 years.

**Sources:** U.S. Department of Commerce and American Iron and Steel Institute.

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**Purposes of the TPM**

The Carter administration had three purposes for establishing the TPM. The potential reason was to facilitate enforcement of existing anti-dumping law. A second purpose was to encourage higher import prices and lower import volume to assist the domestic steel industry. The third objective was to reduce higher import prices and to be a deterrent to unfair trade practices.

**Chart 1**

The TPM suffered the inherent weakness of most control programs: there were economic incentives to evade and avoid the controls, and many ways of doing so.


**Economic Effects**

The steel industry anticipated that the TPM would raise the price of imported steel so that domestic steel producers could raise prices while increasing their market share. The possibility of a rise in prices appeared to be what happened in 1979. Crandall examined the effects of the TPM on steel prices in 1979, market share, and performance of the TPM adjusted to the downturn in the domestic steel industry. He compared estimates for 1979 (the first full year of operation) to see if the TPM raised U.S. import prices by 10.3 percent; this caused a 1.1 percent rise in domestic producer prices. The domestic producers probably raised their prices by much less than the import price increase, because domestic prices were already reduced significantly above import prices for many products. The weighted average price increase to steel users, assuming 1979. On request, the department would conduct an administrative review to determine whether the complainant had satisfied its conditions. The department would then initiate an anti-dumping or anti-subsidy investigation. The purpose of the TPM was to avoid even more restrictive measures, such as by the TPM.
The trigger price mechanism (TPM), implemented early in 1978, was devised to detect imports of steel at unfairly low prices and trigger the administrative relief provided by law. In 1977, the U.S. steel industry was facing tough import competition that compounded its problems of aging, inefficient plants, high wage rates, and low capacity utilization. U.S. steel imports had jumped to a record level of 19.5 million tons, 3 million tons higher than the previous record established in 1971 (see chart 1).

The U.S. steel industry contended that foreign producers were selling steel at "less than fair value" in the U.S. market; indeed, in 1977 the Treasury Department was investigating 19 separate anti-dumping complaints from the domestic steel industry. U.S. law provides for anti-dumping duties to be levied on imports that are dumped—or sold at "less than fair value." If such sales cause material injury to a U.S. industry, Fair value is the price charged in the exporter's home country. The law also provides for the imposition of countervailing duties to offset foreign subsidies that subsidized imports cause material injury to a U.S. industry.

The TPM established reference prices for steel imports. Imports at prices below the reference price would trigger an investigation of whether imports were being dumped and whether injury was occurring. While the TPM did not change the duty, it did facilitate government-initiated dumping investigations. The Tariff Act of 1930 provides that an investigation may be initiated by the government or by a petition from a firm or other interested party. Investigations almost always resulted from petitions from firms and seldom if ever were initiated by the government. Proponents of the TPM expected that constant monitoring of import prices and foreign costs would make possible more rapid initiation and completion of investigations and, if warranted, implementation of anti-dumping duties. The TPM did not remove a foreign supplier's right to due process under the anti-dumping law, nor did it remove a domestic firm's legal right to file petitions.

Gerald H. Anderson is an economic adviser with the Federal Reserve Bank of Cleveland. Charlotte M. Taylor provided research assistance for this article.

The views stated herein are those of the author and not necessarily those of the Federal Reserve Bank of Cleveland or of the Board of Governors of the Federal Reserve System.
First, price and quality are inextricably intertwined, so a minimum price for a product can be evaded by increasing the product's quality. Consequently, trigger prices must specify clearly the quality of the product. This is a complex task, as there are many aspects of quality and almost limitless combinations of qualities. The complexity was evidenced by the TPM Price Manual for the first quarter of 1981, containing 260 pages of data to calculate trigger prices for various products with specific combinations of qualities. Moreover, some qualities, such as molecular structure, hardness, tensile strength, and specific physical dimensions, are not readily apparent, making it possible to mislabel products.

Third, the true price in a transaction between related parties is difficult to determine, even with full information. In 1981 there were complaints that some steel serum were sold at less than fair value. Apparently, many firms decided to do just that, as shown by the following European report for period 6:

Depreciation of European currencies relative to the U.S. dollar lowered European production costs relative to trigger prices. The trigger price is the price charged in the exporter's home country. The law provides for the imposition of anti-dumping duties if imports are dumped—or sold at "less than fair value"—and foreign producers were selling steel at a lower price in the U.S. market; indeed, in 1977 the Treasury Department investigated 19 separate anti-dumping complaints from the steel industry. U.S. law provides for anti-dumping duties to be levied on imports that are "dumped"—or sold at "less than fair value"—if such sales cause material injury to an U.S. industry. Fair value is the price charged in the exporter's home country. The law also provides for the imposition of countervailing duties to offset foreign subsidies if it subsidized imports cause material injury to a U.S. industry. The steel trigger price mechanism (TPM), implemented early in 1978, was devised to detect imports of steel at unfairly low prices and trigger the administrative relief provided by law. In 1977, the U.S. steel industry was facing tough import competition that compounded its problems of aging plants, high steel prices, and low capacity utilization. U.S. steel imports had jumped to a record level of 19.3 million tons, 1 million tons higher than in the previous record established in 1971 (see chart 1).

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