UNITED STATES TARIFF COMMISSION

CYLINDER, CROWN, AND SHEET GLASS

Report in Response to the President's Request
for Information Supplemental to the Report
on Escape-Clause Investigation No. 7-101

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U.S. Tariff Commission
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REPORT IN RESPONSE TO THE PRESIDENT'S REQUEST FOR INFORMATION SUPPLEMENTAL TO THE REPORT ON ESCAPE-CLAUSE INVESTIGATION NO. 7-101

Introduction

On May 17, 1961, the Tariff Commission submitted to the President its report on escape-clause investigation No. 7-101 concerning cylinder, crown, and sheet glass, in which the Commission recommended escape action. 1/ By letter dated June 29, 1961, the President requested the Commission to furnish additional information on the following matters:

1. The impact of pricing practices by domestic and foreign producers upon the share of the market captured by imports.

2. The profit relationship to investment in productive facilities.

3. The effect of domestic technological innovations and automation.

4. Average unit price data for domestic production in terms of major points of shipment.

5. An elaboration upon the suggestion that there have been restrictive sales practices by domestic producers.

6. The relationship of domestic shipments to general economic trends, particularly with respect to those in the construction and automobile industries.

7. The pricing practices employed by those selling the sheet glass that is imported.

1/ U.S. Tariff Commission, Cylinder, Crown, and Sheet Glass: Report to the President on Escape-Clause Investigation No. 7-101 . . ., 1961 (processed).

In order to obtain the information requested, the Commission sent questionnaires to the domestic producers and to certain importers and U.S. sales agents of foreign manufacturers. The Commission also obtained information from its files, through fieldwork by members of the Commission's staff, and from written statements and briefs submitted by various interested parties.

The following parts of this report are addressed to the specific topics on which the President requested information.

The impact of pricing practices by domestic and foreign producers upon the share of the market supplied by imports

The method of pricing of sheet glass by U.S. producers and foreign producers has been very complex. For this reason, it has not been practicable to compare the prices paid for domestic glass by those who purchase directly from the factory (direct factory buyers) with the prices paid by importers for foreign glass in each of the many categories in which sheet glass is sold.

An analysis of the prices for representative categories of sheet glass and related charges and discounts since 1955, indicates that the foreign producers have attempted to construct and maintain schedules of prices, discounts, and other charges that would provide delivered prices sufficiently below the delivered prices of domestic glass to assure entry of sheet glass into the U.S. market. The margin by which the foreign producers have been able to undersell the domestic producers declined somewhat during the 1955-60 period. Generally, when foreign producers raised their prices they raised them more often and to a greater extent than did domestic producers; and when foreign producers lowered their

prices, they did not reduce them as often and as much as did the domestic producers. Neither the foreign nor the domestic producers consistently took the leadership in making the aforementioned price changes.

The method or practice that domestic and foreign producers follow in pricing their sheet glass was described in detail in the Commission's May 1961 report on sheet glass. In brief, the net prices charged by U.S. producers are based on a complex schedule of published list prices that in general vary directly with the area and the thickness of the glass. The prices quoted in these schedules are subject to one or more supplements, discounts, or allowances depending on (1) the amount of fractional cutting required, (2) the type and size of container in which the glass is shipped, (3) the period within which payment must be made, and (4) the extent to which freight charges are absorbed.

The major Western European producers price their sheet glass for sale to U.S. importers in much the same manner as domestic producers price theirs to direct factory buyers. These European producers have consistently used the same general size and thickness categories in their price schedules and have provided for the same categories of additional charges and discounts; their prices, discounts and charges have differed from those quoted by the domestic producers primarily in amount.

The most significant difference in the pricing practices of the domestic and foreign producers of sheet glass has been the method by which each has absorbed certain portions of the freight charges. Before April 1960, U.S. producers priced sheet glass f.o.b. their plants, but absorbed the freight charges in excess of those that would have applied

if the glass had been shipped from the nearest plant of a competing producer.

Although U.S. producers continued to quote prices on an f.o.b. plant basis after April 1960, in effect they changed over entirely to a delivered-price basis. Under the new terms of sale they absorbed all freight charges (at the lowest carload rate) on most shipments of glass within the United States. 1/

Before October 1960 the major Western European producers provided in their terms of sale certain supplements to, or allowances from, their prices, depending on the location of the particular importer in the United States. The application of these supplements and allowances generally resulted in importers located at inland points paying less to the foreign producer for sheet glass than importers located at or near seaports. In October 1960 the major Western European producers changed their terms of sale to a delivered-price basis, similar to the terms of the domestic producers, even to the extent of limiting the freight allowance on shipments to customers located west of Denver.

The change by domestic producers in April 1960 to the equivalent of a delivered-price basis for customers located east of Denver was designed to reduce the share of the market supplied by imports. The adoption of a similar delivered-price basis by the foreign producers in October 1960, however, appears to have largely nullified that effort by the domestic producers. With both domestic and foreign producers now quoting on a

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1/ Freight absorption by U.S. producers on westbound shipments is limited to an amount equal to the freight charge on shipments from the producer's plant to Denver, Colo.

delivered price basis customers are more able than ever before to determine the price differential between domestic and imported sheet glass on a delivered basis.

The profit relationship to investment in productive facilities

The Commission sought by questionnaire to obtain investment data on productive facilities for the years 1955-60 from virtually all domestic concerns that produced sheet glass in 1960. 1/ Productive facilities include primarily land, buildings, machinery, and equipment, used directly or indirectly in the manufacture of the product; they do not include warehouses used to store the finished product, equipment used in marketing and selling the product, or other nonmanufacturing equipment. The concerns were requested to furnish the actual cost of the productive facilities, as well as the depreciated or net book value of such facilities.

In investigation No. 7-101 the Commission obtained usable profit-and-loss data for six concerns 2/ which together accounted for 96 percent or more of the domestic production of sheet glass in 1955-60. These same concerns furnished adequate data on their investment in production facilities; such data are summarized in table 1 in the appendix. Two of the concerns operate on an accounting year ending June 30; data for these concerns for the accounting year ended June 30, 1960, are shown in the table under 1959, and the data for the accounting year ended June 30, 1959, are shown under 1958, and so on. Consequently, the data for 1960 in the

1/ No questionnaires were sent to several producers of small quantities of sheet glass specialties.

2/ These 6 concerns operated 13 plants in which sheet glass was produced during 1955-60.

table cover only four concerns. These four concerns all operate on a calendar-year basis.

Table 2 shows for each of the years 1955-60 the ratio of the aggregate net operating profit of the six reporting concerns (a) to the reported aggregate actual cost of their productive facilities, and (b) to the reported aggregate depreciated or net book value of such facilities. The profit ratio based on the reported actual cost declined from 46.6 percent in 1955 to 8.0 percent in 1958 and increased to 17.9 percent in 1959. The four concerns for which data are shown for 1960 reported an aggregate net operating loss in that year equal to 1.2 percent of the aggregate actual cost of their productive facilities. The ratio based on net book value declined from 93.4 percent in 1955 to 16.7 percent in 1958 and increased to 34.5 percent in 1959. The four concerns for which data are shown for 1960 reported an aggregate net operating loss in that year equal to 2.4 percent of the aggregate depreciated or net book value of their productive facilities.

While these ratios are indicative of the general trend in the profits of the industry, they are not particularly satisfactory measures of the industry's profitability in any given year. Because of the upward trend of prices in recent years, profit ratios based on the actual cost of the industry's productive facilities would approximate profit ratios based on replacement cost much more closely than would profit ratios based on depreciated or net book value. The ascertainment of replacement cost, however, would be an impossible task for the Commission to undertake.

The effect of domestic technological innovations and automation

The production of sheet glass, as described in the Commission's report of May 1961, is virtually a continuous operation consisting of the mixing and melting of the raw materials into a molten mass, and the drawing of the molten glass into a continuous sheet. Devices have been installed at most of the newer plants for automatically weighing, mixing, and transferring the batch ingredients to the melting tanks. Most of this equipment was installed before 1955. The continuous process of melting, refining, and drawing of the glass into sheet form was developed many years ago, and is already highly mechanized. Most of the improvements that were made in sheet glass plants during the 1955-60 period related to cutting, handling, and shipping the glass. The principal area of mechanization in recent years has been in the cutting operation, which until recently was almost wholly carried on by hand.

In response to the Commission's questionnaire, domestic producers reported the technological improvements that were installed in their sheet glass plants in the period 1955-60. Among the items reported by one or more producers are the following: (1) Glass-cutting machines; (2) mechanized handling of incoming raw materials and supplies; (3) automatic kilns for burning refractory drawing blocks; (4) a pack system for handling stock sheets; (5) automatic cutoff and breakoff equipment; (6) mechanized cullet-handling equipment; (7) parallel edge cutters on drawing machines; and (8) wider drawing machines to permit the drawing of wider sheets of glass.

The domestic producers were also asked to report the effect of technological improvements in their sheet glass plants on the man-hours expended by production and related workers, as well as on manufacturing costs and net operating profit (or loss). The three producers (accounting for about 80 percent of total U.S. production of sheet glass in 1960) that responded to this question indicated that the man-hours expended by production and related workers would have been greater and the net operating profit of such concerns somewhat less, had the improvements not been made. 1/

These three companies indicated that the savings in manufacturing costs that ordinarily would have been expected from such technological improvements were only partially realized because of a combination of circumstances. Efforts to install automatic cutting equipment--probably the most costly of the innovations reported--met with considerable resistance from labor unions. 2/ Furthermore, the efficient operation of the new cutting equipment that was put into operation was impaired by the increase in the last several years in the proportion of orders given producers for sheet glass cut to fractional sizes, which can be cut more economically by hand than by machine. The producers also indicated that the reduced volume of operations, the increased wage rates, and the higher costs of materials and supplies that have occurred since

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1/ Only two companies estimated what the cost of goods manufactured would have been had the improvements not been made; both reported that such costs would have been somewhat greater than those actually incurred.

2/ Use of automatic cutting equipment already installed at several plants by one producer was delayed by more than a year because of difficult negotiations with the labor unions over its use.

1955 have offset some of the savings (in man-hours and other manufacturing costs) that have resulted from the installation of improvements.

Average unit price data for domestic production, in terms of major points of shipment

The major points from which U.S. producers ship sheet glass are to be found in the following areas: (1) The West Virginia-Ohio-Pennsylvania area, having plants at Charleston and Clarksburg, W. Va.; Mount Vernon, Ohio; and Arnold and Jeannette, Pa.; (2) the Oklahoma-Arkansas-Louisiana area, having plants at Henryetta and Okmulgee, Okla.; Ft. Smith, Ark.; and Shreeveport, La.; and (3) the Illinois-Indiana area, having plants at Decatur, Ill.; and Vincennes, Ind. 1/

The weighted average net sales value, f.o.b. plant (in cents per pound), for the plants located in each geographical area, for the years 1955-60, are shown in table 3.

An elaboration upon the suggestion that there have been restrictive sales practices by domestic producers

During the 1955-60 period about 80 percent of the total quantity of sheet glass produced in the United States was sold at factory prices by the producers. Most of the remaining 20 percent was used by the producers in the manufacture of other products (such as tempered and laminated glass); part was distributed by one producer through its wholly owned distribution system at various other price levels. 2/ In merchandising

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1/ The data for the plants have been combined on an area basis in order to avoid disclosure of the operations of individual plants.

2/ Such sales accounted for about 20 percent of that concern's total sales of sheet glass.

the 80 percent at factory prices, it has been the practice of domestic producers to sell only to selected distributors and industrial users operating as direct factory buyers and in carload or truckload quantities.

These domestic producers were asked to submit to the Tariff Commission a list of the criteria which they used in selecting their customers for sheet glass. The principal criteria that they reported are as follows:

(1) The potential volume of the local market that the distributor seeking to become a new direct factory buyer would serve.

(2) The adequacy with which the particular market was being served by distributors that were already direct factory buyers of the particular producer.

(3) The extent to which the products of other producers of sheet glass were being distributed in the particular market.

(4) The extent to which the potential direct factory buyer was financially able to maintain an adequate inventory of the particular producers's sheet glass.

(5) The adequacy and effectiveness of the potential buyer's sales force for promoting the sale of the particular producer's glass and for providing the services to customers that would enhance the reputation of the producer's glass.

(6) The experience of the potential direct factory buyer in distributing sheet glass.

(7) The adequacy of the particular distributor's warehousing and other facilities and equipment.

(8) The financial responsibility of the concern, as reflected in its credit rating and, where pertinent, the credit rating of its owners.

The principal criteria which the domestic producers indicated they used to select industrial buyers of their sheet glass, such as fabricators and processors, are as follows:

(1) The credit standing of the concern.

(2) The volume of glass that might be purchased by the concern and whether the concern's purchases would be large enough to make direct factory purchasing mutually advantageous.

(3) The effect that the selection of the potential industrial buyer might have on the loss of sales by the producer's existing distributors in that area.

As a result of these selective practices, some distributors and industrial buyers of sheet glass have not been able to meet any of their sheet glass requirements by purchasing directly from the U.S. producers; they have had to meet requirements by purchasing from distributors that were direct factory buyers, usually at prices higher than those paid by the direct factory buyers.

These practices, as well as several others, were the subject of a civil antitrust action by the U.S. Department of Justice in 1945 (commonly referred to as "the Flat Glass case" 1/), against six companies that manufacture flat glass (four of whom are producers of sheet glass). As a result of this action the parties involved negotiated a consent judgment which was approved by the court on October 30, 1948. In this judgment Pittsburgh Plate Glass Co. and Libby-Owens-Ford Glass Co. were ordered to increase by the end of 1952 the number of their non-company-owned sales outlets for plate or sheet glass, or both, by 10 percent. 2/

Representations have been made to the Commission that the competitive impact of the practice of U.S. producers in limiting the number of

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1/ United States v. Libby-Owens-Ford Glass Co. et al., U.S.D.C., N.D. Ohio, Western Division, Civil Action No. 5239.

2/ Based on the average number of such outlets to which they sold such glass during the period 1944-48 inclusive.

their direct factory buyers has forced concerns that were not direct factory buyers to meet a significant part of their sheet glass requirements with purchases from foreign manufacturers, and as a result, has contributed substantially to the increase in imports since 1955.

With reference to these representations, an analysis was made of the buying practices of all the concerns that imported sheet glass during the period April-June 1960. On the basis of information obtained from importers and other sources, the Commission found that 82 percent of the total sheet glass imported during that period (which had a foreign value of about $7.4 million) was accounted for by 233 concerns that in 1960 were also direct factory buyers of domestic sheet glass; 5 percent was entered by 10 sales agents of foreign sheet glass producers that imported glass for their own account for resale; 5 percent was entered by 17 concerns that use imported rather than domestic glass because of certain technical properties of the imported glass; and 8 percent by 72 concerns that imported sheet glass for a variety of reasons, including the inability of some concerns to purchase domestic glass at factory prices.

The relationship of domestic shipments to general economic trends, particularly with respect to those in the construction and automobile industries

Annual data on the trend of industrial production, residential building construction, 1/ automobile production, apparent U.S. consumption of sheet glass, 2/ and domestic producers' shipments of sheet glass 3/

1/ Residential construction is the most representative indicator of the trend of the quantity of sheet glass consumed by the construction industry, inasmuch as there is a wide variation in the quantity of sheet glass used to glaze each nonresidential building (from no sheet glass in some buildings to virtually the entire glazing of other buildings).

2/ U.S. producers' shipments, less exports, plus imports for consumption.

3/ Includes intracompany shipments and exports.

for the years 1950-61 are shown in table 4. Monthly data on the level of industrial production, housing starts, and automobile production from January 1959 through 1961 are shown in table 5.

The U.S. consumption of sheet glass is supplied by both U.S. producers' shipments and by imports. The respective shares of total consumption supplied from these two sources are determined principally by the comparative delivered prices--not by the aggregate demand for sheet glass.

A comparison of the indexes of U.S. producers' shipments of sheet glass and apparent U.S. consumption of sheet glass during the 1950-60 period shows that--except for 1951 and 1956--these two indexes generally varied directly with one another but the annual changes in each were not proportional. Moreover, the two indexes have diverged considerably in recent years, such divergence reflecting an increase in imports.

A comparison of the indexes of U.S. producers' shipments of sheet glass and total U.S. industrial production during 1950-61 shows that in only about half of those years did the changes in the two indexes vary directly with one another.

During 1950-61, annual changes in U.S. producers' shipments of sheet glass generally reflected changes in the levels of automobile production and home construction. Only for 1957, 1960, and 1961 did the changes in the index of producers' shipments vary inversely with the index of automobile production, and only for 1954 and 1958 did the changes in the index of producers' shipments vary inversely with the index of home construction. 1/ The home construction and automobile industries are two of the largest

1/ Data on home construction for the full year 1961 are not available.

readily identifiable markets for sheet glass; 1/ however, the effect of annual fluctuations in the demand by these industries on U.S. consumption and U.S. producers' shipments of sheet glass are obscured by the consumption of sheet glass in other uses. The level of activity in other industries using sheet glass tends to be more stable than that in the construction and automobile industries; it follows more closely the changes in the general level of the economy. These other industries use sheet glass for glazing storm sash and doors, for technical purposes, for incorporation in appliances and cabinets, in the manufacture of mirrors, and in glazing nonresidential structures. 2/ The most important uses of sheet glass--i.e., the replacement of glass in buildings and in automobiles 3/--is in a market where the demand is unusually stable; such stability tends to modify the impact of cyclical factors on the overall demand for sheet glass.

The pricing practices employed by those selling the sheet glass that is imported

Almost all of the concerns that import foreign sheet glass for resale in the United States are also direct factory buyers of domestically produced glass and offer for sale both domestic and imported glass in truck or carload quantities, as well as on an individual-box basis. 4/

1/ It is impossible to determine accurately the share of the total consumption of U.S. shipments of sheet glass that is installed in new buildings and automobiles; the very large share of shipments going to distributors and jobbers (about 50 percent of total domestic producers' shipments) obscures their end use. Fluctuations in the levels of activity in these two industries increase the difficulty of determining accurately the share that they consume. It is estimated that home construction accounts for about 20 percent and automobile production for about 11 to 18 percent of total domestic producers' shipments.

2/ Sheet glass consumed in these uses accounts for about 33 percent of total shipments of sheet glass by U.S. producers.

3/ Sheet glass used in the replacement of broken windows, including vehicle windows, accounts for about 30 to 35 percent of the total shipments of sheet glass by U.S. producers.

4/ Several of the U.S. sales agents of certain foreign sheet glass producers import glass for their own account for resale.

These distributors usually sell the imported glass on the same terms (though not usually at the same prices) as domestic glass, extending credit and performing the same services in conjunction with their sales of imported glass as they do on their sales of domestic glass. 1/

The methods used by distributors to determine the resale prices for foreign glass vary considerably. Many distributors import sheet glass primarily to fill specific orders for customers that have specified foreign glass in carload or truckload quantities. On such sales the distributors usually charge the customer 5 percent above their costs. Other distributors import substantial quantities of sheet glass for stock and resell it at regularly published prices; the markup on such imported glass tends to be a little higher than the markup on the prices for domestic glass. Still other distributors, particularly those that are not located in the principal seaboard areas and import only a small proportion of the sheet glass that they require, commingle comparable imported and domestic glass and sell both at the same price.

Information obtained from distributors of imported sheet glass in the Baltimore, Philadelphia, and New York areas indicates that during 1960 and 1961 they sold the sheet glass they imported from the United Kingdom, Belgium, France, and West Germany at prices ranging from 1 to 4 percent below the prices at which they sold comparable domestic glass.

1/ Foreign producers generally break down their price lists by the same size brackets as U.S. producers do and usually make the same type of charges for extra services. Distributors have almost universally maintained these same size brackets in their price lists and these same types of additional charges.

STATISTICAL APPENDIX

Table 1.--Investment in productive facilities employed in the production of sheet glass, reported by 6 U.S. producers for 1955-59 and by 4 U.S. producers for 1960 1/

(In thousands of dollars)

Year and item	Actual cost at end of year 2/	Accumulated depreciation and amortization at end of year 3/	Net book value at end of year
1955			
Land	1,252	-	1,252
Land improvements	1,046	668	378
Buildings	27,334	12,826	14,508
Machinery, equipment, and fixtures	34,862	18,806	16,056
Total	64,494	32,300	32,194
1956			
Land	1,280	-	1,280
Land improvements	1,091	698	393
Buildings	28,256	13,524	14,732
Machinery, equipment, and fixtures	37,188	20,345	16,843
Total	67,815	34,567	33,248
1957			
Land	1,291	-	1,291
Land improvements	1,177	741	436
Buildings	30,246	14,428	15,818
Machinery, equipment, and fixtures	43,226	22,076	21,150
Total	75,940	37,245	38,695
1958			
Land	1,290	-	1,290
Land improvements	1,195	785	410
Buildings	30,978	15,471	15,507
Machinery, equipment, and fixtures	45,686	24,863	20,823
Total	79,149	41,119	38,030
1959			
Land	1,413	-	1,413
Land improvements	1,712	858	854
Buildings	36,790	16,750	20,040
Machinery, equipment, and fixtures	56,403	28,591	27,812
Total	96,318	46,199	50,119
1960			
Land	1,186	-	1,186
Land improvements	1,664	917	747
Buildings	34,735	16,710	18,025
Machinery, equipment, and fixtures	58,874	30,105	28,769
Total	96,459	47,732	48,727

1/ Data for 2 concerns are for 1955-59, since these concerns are on an accounting year ending June 30, and data for the accounting year ended June 30, 1960, are shown under 1959, data for the accounting year ended June 30, 1959, are shown under 1958, etc.

2/ Investment in productive facilities (actual cost) at beginning of year, plus additions and improvements, less retirements and disposals during the year.

3/ Accumulated depreciation and amortization at beginning of year, plus accrual for depreciation and amortization for the year, less deductions from accumulated depreciation for retirements and disposals during the year.

Source: Compiled from data supplied the U.S. Tariff Commission by domestic producers.

Table 2.--Investment in productive facilities employed in the production of sheet glass and net operating profit on such production, reported by 6 U.S. producers for 1955-59 and by 4 U.S. producers for 1960

Year	Investment in productive facilities at end of year		Net operating profit before income taxes	Ratio of net operating profit to investment in productive facilities	
	Actual cost	Net book value		Actual cost	Net book value
	1,000 dollars	1,000 dollars	1,000 dollars	Percent	Percent
1955	64,494	32,194	30,056	46.6	93.4
1956	67,815	33,248	25,502	37.6	76.7
1957	75,940	38,695	10,007	13.2	25.9
1958	79,149	38,030	6,349	8.0	16.7
1959	96,318	50,119	17,276	17.9	34.5
1960	96,459	48,727	-1,165	-1.2	-2.4

Source: Compiled from data supplied the U.S. Tariff Commission by the domestic producers.

Note.--2 of the concerns for which data are given in the above table operate on an accounting year ending June 30; data for these concerns for the accounting year ended June 30, 1960, are shown in the table under 1959, and the data for the accounting year ended June 30, 1959, are shown under 1958, and so on. Consequently, the data for 1960 cover only 4 concerns. These 4 concerns all operate on a calendar-year basis.

Table 3.--Cylinder, crown, and sheet glass: Weighted average net sales value per pound of 6 U.S. producers' shipments, f.o.b. producing plant, by geographic area, 1955-60 1/

(In cents per pound)

Year	Area			Average
	West Virginia-Ohio-Pennsylvania	Oklahoma-Arkansas-Louisiana	Illinois-Indiana	
1955	8.2	8.1	7.5	8.2
1956	8.5	8.5	8.0	8.5
1957	8.6	8.6	8.0	8.6
1958	8.6	9.5	7.9	8.6
1959	8.7	8.8	8.2	8.7
1960	8.7	8.6	8.3	8.6

1/ Does not include the average net sales value of intracompany transfers.

Source: Compiled from data supplied the U.S. Tariff Commission by domestic producers.

Table 4.--Sheet glass: Indexes of apparent U.S. consumption of sheet glass, U.S. producers' shipments of sheet glass, total U.S. industrial production, dwelling units put in place in the United States, and U.S. automobile production, 1950-61

(1950=100)

Year	Apparent U.S. consumption of sheet glass 1/	U.S. producers' shipments of sheet glass 2/	Total U.S. industrial production 3/	Dwelling units put in place in the United States 4/	U.S. automobile production 5/
1950	100	100	100	100	100
1951	101	97	108	81	83
1952	87	86	112	80	68
1953	104	98	121	83	97
1954	96	90	114	92	88
1955	125	110	128	110	135
1956	130	109	132	94	100
1957	100	87	133	86	109
1958	97	77	124	97	77
1959	142	110	140	132	104
1960	6/ 114	88	144	111	127
1961	7/	6/ 89	8/ 145	7/	104

1/ Based on the number of pounds of U.S. producers' shipments, less exports, plus imports for consumption.
2/ Based on the number of pounds shipped. Includes exports.
3/ Based on the value of production, adjusted to constant dollars. Includes durable and nondurable goods, mining, and utilities.
4/ Based on the value of nonfarm public and private residential dwelling units put in place, adjusted to constant dollars.
5/ Based on the number produced.
6/ Preliminary.
7/ Not available.
8/ Estimated.

Source: Computed from official statistics of the U.S. Department of Commerce and from data supplied the U.S. Tariff Commission by the domestic producers of sheet glass.

Table 5 .--Sheet glass: Index of total U.S. industrial production, number of housing starts in the United States, and U.S. automobile production, by months, January 1959-December 1961

Year and month	Index of total U.S. industrial production 1/ (1950=100)	Housing starts in the United States 2/	U.S. automobile production 3/
		Thousands	Thousands
1959:			
January	133.7	95.3	129.0
February	135.8	98.0	119.6
March	138.1	126.4	131.3
April	142.1	149.1	131.0
May	145.6	150.8	130.4
June	146.1	146.8	127.2
July	143.4	145.1	121.2
August	138.1	137.8	57.8
September	137.6	132.4	60.3
October	136.0	117.9	116.6
November	136.8	102.5	60.7
December	145.0	92.8	101.8
1960:			
January	148.1	82.0	171.3
February	146.1	89.7	157.4
March	145.4	89.4	143.1
April	144.9	121.2	137.3
May	146.2	128.1	146.3
June	145.8	121.2	131.8
July	145.8	112.6	103.5
August	144.4	128.2	65.1
September	142.2	94.9	98.3
October	141.4	107.3	145.3
November	139.3	91.8	136.1
December	137.3	63.7	116.9
1961:			
January	136.4	68.3	93.8
February	136.3	72.5	91.4
March	136.8	102.2	88.7
April	140.8	108.7	111.7
May	144.4	124.2	118.4
June	147.2	129.5	127.5
July	149.3	122.7	97.7
August	150.7	124.2	44.6
September	148.1	120.7	83.6
October	150.4	121.3	125.1
November	4/ 152.1	4/ 100.9	4/ 149.7
December	5/ 153.3	6/	4/ 145.4

1/ Based on seasonally adjusted constant dollars. Includes durable and nondurable goods, mining, and utilities.
2/ Unadjusted numbers of nonfarm private units started.
3/ Average weekly number assembled each month.
4/ Preliminary.
5/ Estimated.
6/ Not available.

Source: Compiled from official statistics of the U.S. Department of Commerce.