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UNITED STATES TARIFF COMMISSION

CALCULATORS, TYPEWRITERS, AND TYPEWRITER PARTS:
WORKERS OF THE
ELMIRA, N. Y., PLANT OF
REMINGTON RAND DIVISION
SPERRY RAND CORP.

Report to the President
on Investigation No. TEA-W-140
Under Section 301(c)(2) of the Trade Expansion Act of 1962



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June 1972

UNITED STATES TARIFF COMMISSION

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Note.--The whole of the Commission's report to the President may not be made public since it contains certain information the publication of which would result in the disclosure of the operation of an individual firm. This published report is the same as the report to the President, except that the above-mentioned information has been omitted. Such omissions are indicated by asterisks.

REPORT TO THE PRESIDENT

U.S. Tariff Commission,
June 19, 1972.

To the President:

In accordance with section 301(f)(1) of the Trade Expansion Act (TEA) of 1962 (76 Stat. 885), the U.S. Tariff Commission herein reports the findings of an investigation, made under section 301(c)(2) of the act, in response to a petition filed on behalf of a group of workers.

On April 20, 1972, the Commission received a petition for determination of eligibility to apply for adjustment assistance on behalf of the then present and former workers of the Elmira, N.Y., plant of Remington Rand Division, a division of Sperry Rand Corp. The Commission instituted its investigation (TEA-W-140) on April 26. The investigation was undertaken to determine whether, as a result in major part of concessions granted under trade agreements, articles like or directly competitive with electronic desk calculators (of the types provided for in item 676.20 of the Tariff Schedules of the United States (TSUS)), electric typewriters and manual (nonelectric) typewriters (of the types provided for in item 676.05 of the TSUS) and typewriter parts (of the types provided for in item 676.50 of the TSUS) produced by Remington Rand Division at Elmira, N.Y., are being imported into the United States in such increased quantities as to cause the unemployment or underemployment of a significant number or proportion of the workers of the Elmira plant.

In a report on an investigation (No. 7-84) 1/ conducted under section 7 of the Trade Agreements Extension Act of 1951, as amended, the Tariff Commission unanimously found in May 1960 that typewriters were not being imported in such increased quantities as to cause or threaten to cause serious injury to the domestic industry producing like or directly competitive products. In January 1971 (TEA-W-36 and TEA-F-15), 2/ the Commission unanimously found that articles like or directly competitive with manual office typewriters, of the kind produced by R. C. Allen, Inc., were not, as a result in major part of concessions granted under trade agreements, being imported into the United States in such increased quantities as to cause, or threaten to cause, the unemployment or underemployment of a significant number or proportion of the workers of such firm or serious injury to the firm.

Public notice of the instant investigation was given in the Federal Register of April 29, 1972 (37 F.R. 8695). No public hearing was requested, and none was held.

In the course of its investigation, the Commission obtained information in the field, from its files, from the New York State Employment Office, from Remington Rand Division, and from other domestic producers and importers of electronic and electro-mechanical calculators, typewriters, and typewriter parts.

1/ Typewriters: Report on Escape-Clause Investigation No. 7-84 . . . , 1960 [processed].

2/ Manual Office Typewriters: Report to the President on Investigations No. TEA-W-36 and TEA-F-15 . . . , TC Publication 358, 1971.

Finding of the Commission

On the basis of its investigation, the Commission unanimously finds that articles like or directly competitive with electronic desk calculators (of the types provided for in item 676.20 of the Tariff Schedules of the United States (TSUS)), electric typewriters and manual typewriters (of the types provided for in item 676.05 of the TSUS) and typewriter parts (of the types provided for in item 676.50 of the TSUS) manufactured by the Elmira, N.Y., plant of the Remington Rand Division of Sperry Rand Corp. are not, as a result in major part of concessions granted under trade agreements, being imported into the United States in such increased quantities as to cause, or threaten to cause, the unemployment or underemployment of a significant number or proportion of the workers of such company.

Statement of Chairman Bedell, Vice Chairman Parker, and
Commissioner Moore

The petitioning workers in the instant case were employed at the Elmira, N.Y., plant of the Remington Rand Division of the Sperry Rand Corp., where several types of typewriters, typewriter parts, and calculators have been produced in recent years. Typewriters have been, by far, the principal product line. Production of calculators at the Elmira plant ceased in April 1971 and in January 1972 officials of Sperry Rand Corp. announced the Elmira plant would be closed. Production of typewriters is currently being phased out. Production of typewriter parts not used in the assembly of typewriters has been insignificant.

Our determination in this investigation is in the negative because in our judgment all the criteria imposed by the Trade Expansion Act of 1962 for an affirmative determination have not been satisfied. A negative determination is mandatory if any one of the following four criteria is not met:

- (1) Articles like or directly competitive with those produced by the workers' firm are being imported in increased quantities;
- (2) The increased imports are a result in major part of concessions granted under trade agreements;
- (3) A significant number or proportion of the workers concerned are unemployed or underemployed, or threatened with unemployment or underemployment; and
- (4) The increased imports resulting from trade-agreement concessions are the major factor causing or threatening to cause the unemployment or underemployment.

In the case at hand, we have determined that the second criterion has not been satisfied. As indicated below, the facts developed in this investigation do not show that the increased imports of articles like or directly competitive with those produced at the Remington Rand Elmira plant are a result in major part of concessions granted under trade agreements.

Typewriters

During the period 1967-71, the Remington Rand plant in Elmira, N.Y., produced standard nonelectric and electric office typewriters. Total U.S. imports of typewriters, consisting largely of portable typewriters, increased materially in the same period. In 1971, imports of typewriters amounted to 2.2 million units, valued at \$87.3 million, indicating an increase since 1967 of 23 percent in terms of quantity, and 44 percent in terms of value.

Imported typewriters, including the types manufactured by the petitioners, have been free of duty since 1913. The only trade-agreement concession granted by the United States on typewriters has been a commitment, made in 1951, to maintain the duty-free treatment. Consequently, there have been no U.S. concessions which resulted in a decrease in duty on imports. Furthermore, the available data show that in the years immediately following the binding of the duty-free tariff status of typewriters, imports remained small, amounting to less than 150,000 units in each of the years 1952-55. Imports of

typewriters reached 609,000 units in 1960, and thereafter have continued to increase almost without interruption. We have found no evidence, however, that the trade-agreement concession binding the duty-free status of typewriters was an important factor affecting the volume of imports. Therefore, we have concluded that criterion 2 specified above has not been satisfied--i.e., the increased imports of typewriters have not been a result in major part of trade-agreement concessions.

Calculators

In recent years the Elmira plant produced both electronic and electro-mechanical desk-type calculators. Data obtained by the Commission in this investigation indicate that U.S. imports of the same types of calculators as those produced at the Elmira plant increased from about 81,000 units, valued at \$17.3 million, in 1967 to 314,000 units, valued at \$83.7 million, in 1970. Imports of these types amounted to 369,000 units, valued at \$76.6 million, in 1971.

U.S. imports of all calculators, based on U.S. Department of Commerce statistics, also indicate a material increase during the period 1967-71. From 392,000 units, valued at \$43.3 million in 1967, U.S. imports increased to 1.6 million units, valued at \$162.3 million in 1971.

Although the rate of duty on calculators has declined as a result of trade-agreement concessions, evidence gathered during the investigation indicates that the increased imports were not in major part the result of these concessions. The trade-agreement concessions applicable to calculators have been substantial. From 35 percent ad

valorem, the rate has been reduced to 5 percent ad valorem. The concessions accounting for about two-thirds of the total duty reductions, however, occurred more than 2 decades ago--long before calculators became important articles in U.S. imports. Concessions negotiated during the recent Kennedy Round have been comparatively minor, resulting in duty reductions of no more than 5-1/2 percentage points in the ad valorem rates. Thus, the increased imports of calculators in the late 1960's and early 1970's must have been a result in major part of factors other than trade-agreement concessions.

In our view, the principal factor contributing to the rise in imports of calculators is the difference in unit labor costs here and abroad. Because of the time required to assemble a calculator, the relatively high U.S. wage rates made it impossible for the U.S. producers of calculators to compete with foreign manufacturers. Only very recently have technological advances been made in the United States to drastically curtail assembly time so that the United States is probably becoming more competitive in the market for electronic desk-type calculators.

Conclusion

On the basis of the foregoing, we find that the second criterion of the statute has not been met with respect to either typewriters or calculators--the articles that have accounted for virtually all the output at the Elmira plant of the Sperry Rand Corp. Accordingly, a negative determination has been made. Under the circumstances, the Commission has not been required to reach a conclusion regarding the other three criteria, and it has not done so.

Statement of Commissioners Leonard and Young

The petitioning workers in the instant case were employed at the Elmira, N.Y., plant of the Remington Rand Division of the Sperry Rand Corp.; where several types of typewriters, typewriter parts, and calculators have been produced in recent years. Typewriters have been, by far, the principal product line. Production of calculators at the Elmira plant ceased in April 1971 and in January 1972 officials of Sperry Rand Corp. announced the Elmira plant would be closed. Production of typewriters is currently being phased out. Production of typewriter parts not used in the assembly of typewriters has been insignificant.

Our determination in this investigation is in the negative because in our judgment all the criteria imposed by the Trade Expansion Act of 1962 for an affirmative determination have not been satisfied. A negative determination is mandatory if any one of the following four criteria is not met.

- (1) Articles like or directly competitive with those produced by the workers' firm are being imported in increased quantities;
- (2) The increased imports are a result in major part of concessions granted under trade agreements;
- (3) A significant number or proportion of the workers concerned are unemployed or underemployed, or threatened with unemployment or underemployment; and
- (4) The increased imports resulting from trade-agreement concessions are the major factor causing or threatening to cause the unemployment or underemployment.

In the case at hand, we have determined that the second criterion has not been satisfied. As indicated below, the facts developed in this investigation do not show that the increased imports of articles like or directly competitive with those produced at the Remington Rand Elmira plant are a result in major part of concessions granted under trade agreements.

Typewriters

The Remington Rand plant in Elmira, N.Y., has produced standard nonelectric and electric office typewriters in recent years. Total U.S. imports of typewriters, consisting largely of portable typewriters, increased materially in the period 1967-71. In 1971, imports of typewriters amounted to 2.2 million units, valued at \$87.3 million, indicating an increase since 1967 of 23 percent in terms of quantity, and 44 percent in terms of value.

Imported typewriters, including the types manufactured by the petitioners, have been free of duty since 1913. The only trade-agreement concession granted by the United States on typewriters has been a commitment, made in 1951, to keep them free of duty. Consequently, there have been no U.S. concessions which resulted in a decrease in duty on imports of that product. Furthermore, in the years immediately following the binding of the duty-free tariff status of typewriters, imports remained small, amounting to less than 150,000 units in each of the years 1952-55. Imports of typewriters reached 609,000 units in 1960, and thereafter have continued to increase

almost without interruption. We have found no evidence, however, that the trade-agreement concession binding the duty-free status of typewriters was an important factor affecting the volume of imports. Therefore, we have concluded that criterion 2 specified above has not been satisfied--i.e., the increased imports of typewriters have not been a result in major part of trade-agreement concessions.

Calculators

In recent years the Elmira plant produced both electro-mechanical and electronic desk-type nonprogrammable calculators. U.S. imports of all calculators, including the types produced at Elmira, increased materially during the period 1967-71. From 392,000 units, valued at \$43.3 million in 1967, U.S. imports rose to 1.6 million units, valued at \$162.3 million in 1971.

Admittedly, the trade-agreement concessions applicable to calculators have been substantial. From 35 percent ad valorem, the rate has been reduced to 5 percent ad valorem. The concessions accounting for about two-thirds of the total duty reductions occurred more than 2 decades ago--long before calculators became important U.S. import articles. Subsequent concessions resulted in reductions in the ad valorem rate of no more than 2-1/2 percentage points in any one year. The concessions negotiated during the recent Kennedy Round, for example, resulted in a total reduction of 5-1/2 percentage points, made effective in five annual stages, the first on January 1, 1968, and the last on

January 1, 1972. The evidence gathered during this investigation indicates clearly that factors other than trade-agreement concessions contributed in very large measure to the quadrupling of U.S. imports of calculators from 1967 to 1971 that was noted above.

In our view the principal reason for the increased imports was the fact that until very recently the Japanese electronics industry has been able to design and produce electronic calculators at a substantially lower cost than could U.S. manufacturers. Since 1969, electronic calculators, both domestic and imported, have become increasingly popular, and have been replacing electro-mechanical calculators of the type produced at Elmira. The first electronic calculators used many integrated circuits and other components that had been developed in connection with the U.S. computer and aerospace programs during the late 1950's and early 1960's. Because of the large number of wiring connections involved, assembly of these early electronic calculators required a great amount of labor. Accordingly, U.S. producers, with their higher wage rates, could not compete with Japanese producers, even though the Japanese bought the basic calculator components from U.S. manufacturers. Moreover, in the late 1960's and into the 1970's, foreign manufacturers (primarily Japanese) designed improved electronic calculators, utilizing much more complex integrated circuitry developed in the United States. Many of these integrated circuit components were also supplied by U.S. manufacturers. These calculators cost much less to produce and were much smaller and lighter than the U.S. counterparts. Hand-held electronic calculators also appeared during this period. All these developments enabled the Japanese producers to dominate the world electronic calculator market until about the beginning of 1972. At about

that time, U.S. producers, taking advantage of recent U.S. technological advances that curtail drastically assembly time, began to be more competitive in the U.S. market for electronic calculators.

Compared with the technological developments here reviewed, the duty reductions resulting from trade-agreement concessions have been, in our opinion, of relatively little importance as a factor contributing to the increased imports of calculators.

Conclusion

On the basis of the foregoing, we find that the second criterion of the statute has not been met with respect to either typewriters or calculators--the articles that have accounted for virtually all the output at the Elmira plant of the Sperry Rand Corp. Accordingly, a negative determination has been made.

INFORMATION OBTAINED IN THE INVESTIGATION

Description of Articles Under Investigation

During the period 1967-71, the Remington Rand plant in Elmira, N.Y., produced standard nonelectric and electric typewriters, typewriter parts, and electronic and electro-mechanical calculators.

Electric and nonelectric typewriters of the type produced in the plant have a standard keyboard. Some have special attachments to be used in the preparation of address or other stencils, braille typing for the blind, and similar material. Toy typewriters of the types included in the imports reported under TSUS item 676.05 are not produced in the Elmira, N.Y., plant.

The electronic desk-type calculators produced by the Elmira, N.Y., plant are nonprogrammable machines which have the capability of adding, subtracting, multiplying, and dividing. They utilize solid-state electronic calculating mechanisms and contain a standard 10-key keyboard; they may contain either one or more memories or no memory. The plant does not produce hand-held electronic calculators.

Until about 5 years ago, office calculators were nearly all of the electro-mechanical type and varied in size and complexity from relatively simple 10-key keyboard machines to complex full keyboard calculators. Recent advances in solid-state technology, however, have resulted in the development of electronic calculators which can be produced at a cost that makes them competitive with the older

electro-mechanical calculators. These new calculators are rapidly replacing many of the electro-mechanical units in large offices and industrial establishments. As the price of these machines continues to drop, increasing numbers of them are being used in homes, schools, and small businesses.

U.S. Tariff Treatment

Typewriters

Typewriters were first mentioned by name in the Tariff Act of 1909, in which they were dutiable at 30 percent ad valorem. They were placed on the free list in the Tariff Act of 1913 and were continued on the free list in the Tariff Act of 1922 and in the Tariff Act of 1930. Typewriters (except specialized types) are classifiable under TSUS item 676.05 and remain duty free. The duty-free status was bound, effective June 6, 1951, pursuant to a concession initially negotiated with Canada, in the General Agreement on Tariffs and Trade (GATT) at Torquay.

Typewriter parts

Typewriter parts have been dutiable under item 676.50 since August 31, 1963, the effective date of the TSUS. Typewriter parts were classified under paragraph 397 of the original schedules of the Tariff Act of 1930 as "articles or wares not specially provided for, . . . if composed wholly or in chief value of iron, steel, lead, copper, brass, nickel, pewter, zinc, aluminum, or other metal"

Such articles were dutiable at 45 percent ad valorem from June 18, 1930, until January 1, 1948, when, as the result of trade-agreement concessions under the GATT, the rate of duty was reduced to 22-1/2 percent ad valorem. Subsequent trade-agreement concessions have resulted in the present rate of 9.5 percent ad valorem, as shown in the following table.

Typewriter parts (TSUS item 676.50 and tariff par. 397 (pt.)):
U.S. rates of duty and effective dates of rate changes,
June 18, 1930, to Jan. 1, 1972

(Rate in percent ad valorem)				
Tariff Act or Trade Agreement	:	Effective date of change	:	Rate of duty
Tariff Act of 1930-----	:	June 18, 1930	:	45
GATT-----	:	Jan. 1, 1948	:	22-1/2
GATT-----	:	June 30, 1956	:	21
GATT-----	:	June 30, 1957	:	20
GATT-----	:	June 30, 1958	:	19
TSUS-----	:	Aug. 31, 1963	:	19
GATT (Kennedy Round)-----	:	Jan. 1, 1968	:	17
Do.	:	Jan. 1, 1969	:	15
Do.	:	Jan. 1, 1970	:	13
Do.	:	Jan. 1, 1971	:	11
Do.	:	Jan. 1, 1972	:	9.5

Electronic and electro-mechanical calculators

Calculating machines were classifiable under paragraph 353 (electric calculators) and paragraph 372 (mechanical calculators) of the Tariff Act of 1930. Those under paragraph 353 were dutiable at 35 percent ad valorem, and those under paragraph 372, at 27.5 percent. By the late 1950's, these rates were both reduced to 10-1/2 percent ad valorem as a result of trade-agreement concessions. Since

August 31, 1963, electronic and electro-mechanical calculators have been classified under item 676.20, which covers calculating machines specially constructed for multiplying and dividing. The 1963 rate of duty for this item was 10.5 percent ad valorem; the present rate is 5 percent ad valorem as the result of U.S. concessions granted in the Kennedy Round of tariff negotiations under the GATT.

The various rates of duty applicable to electronic and electro-mechanical calculators under the Tariff Act of 1930, as modified by trade-agreement concessions, are given in the following table.

Calculating machines especially constructed for multiplying and dividing (tariff par. 353 (pt.), tariff par. 372 (pt.), and TSUS item 676.20): U.S. rates of duty, and effective date of rate changes, June 18, 1930, to Jan. 1, 1972

(Rate in percent ad valorem)

Tariff Act or Trade Agreement	Effective date: of change	Rate of duty	
		Tariff par. 353(4), 372(22)	TSUS item 676.20
Tariff Act of 1930-----	June 18, 1930	<u>1/</u> 35	-
Bilateral with Sweden-----	Aug. 5, 1935	25	-
GATT-----	Jan. 1, 1948	15	-
GATT-----	June 6, 1951	12-1/2	-
GATT-----	June 30, 1956	11-1/2	-
GATT-----	June 30, 1957	11	-
GATT-----	June 30, 1958	10-1/2	-
TSUS-----	Aug. 31, 1963	-	10-1/2
GATT (Kennedy Round)-----	Jan. 1, 1968	-	9
Do.	Jan. 1, 1969	-	8
Do.	Jan. 1, 1970	-	7
Do.	Jan. 1, 1971	-	6
Do.	Jan. 1, 1972	-	5

1/ Rate of duty for tariff par. 373(22) was 27-1/2 percent ad valorem effective June 18, 1930.

U.S. Producers

Typewriters

The U.S. typewriter industry has traditionally consisted of a few domestic firms. During the 1930's, for example, four companies (Royal Typewriter Co., Remington Rand, L.C. Smith & Corona Typewriters, and Underwood Elliott Fisher Co.) accounted for more than * * * percent of the typewriter business in the United States. For various reasons, each of these firms eventually merged with a company outside the typewriter industry. In the mid-1950's, with acceptance of the office electric typewriter, International Business Machines (IBM), became a modest factor in the typewriter industry for the first time.

As of December 1971, these five U.S. companies had continued to account for virtually all of the portable and nonportable typewriters manufactured in the United States. At present, however, only L.C. Smith & Corona (now Smith Corona, Marchant (SCM)), Underwood Elliott Fisher Co. (now Olivetti-Underwood) and IBM continue to manufacture typewriters in the United States.

Calculators

The five major U.S. producers of electro-mechanical calculators during the period 1967-71 were Monroe Division--Litton Industries, Business Machines Division--Singer Co., Victor Comptometer Corp., Remington Rand, and SCM Corp. All these firms were producing electro-mechanical calculators in 1967, * * *.

All the above-listed producers of electro-mechanical calculators also manufactured electronic calculators during 1967-71, and four of the five firms were producing these items domestically in 1972.

In recent months, several U.S. firms, including some small lesser known ones, have entered the U.S. electronic calculator market. These include Eldorado Electrodata Corp., Ragan Precision Industries, Inc., and Omron Systems, Inc. Most U.S. calculator producers purchase integrated circuits and display panels from manufacturers of semiconductor components, such as Texas Instruments, North American Rockwell Microelectronics, and Mostek Corp. The use of these devices greatly reduces the labor content in electronic calculators.

U.S. Consumption, Shipments, and Exports

Typewriters

Apparent U.S. consumption of all typewriters (table 1) declined irregularly during the period 1967-70, from 3.6 million units in 1967 to 2.9 million units in 1970. Official statistics on apparent U.S. consumption of all typewriters, expressed in units, are not available for 1971, but the number consumed is believed to have declined. In terms of value, however, apparent U.S. consumption of all typewriters actually increased in the period 1967-70, from \$476.5 million in 1967 to \$490.3 million in 1970 (table 1). In 1971, apparent U.S. consumption of all typewriters dropped to \$415.6 million, the lowest point for the 5-year period.

U.S. shipments of all typewriters generally decreased during the period 1967-71, as shown in table 1. From 1.9 million units, valued at \$436.1 million, in 1967, shipments declined to 0.9 million units, valued at \$416.3 million, in 1970. In 1971, the value of shipments declined still further to \$340.3 million, or by 18 percent from the preceding year. Quantity data on shipments are not available for 1971.

U.S. exports of typewriters declined irregularly during the period 1967-71 (table 1). From 126,000 units, valued at about \$20 million, in 1967, such exports declined to 69,000 units, valued at about \$12 million, in 1971.

Typewriter parts

In terms of value, apparent consumption of typewriter parts decreased from \$31.3 million in 1967 to \$26.8 million in 1968, then increased to \$29.3 million in 1969 and to \$31.7 million in 1970, as shown in table 6. Quantity data are not available for the period 1967-71, nor are value data for 1971.

U.S. shipments of typewriter parts increased irregularly in value during 1967-70 (data are not available for 1971). From \$50.6 million in 1967, shipments declined slightly to \$49.5 million in 1968 and to \$47.1 million in 1969, but then rose to \$55.3 million in 1970.

U.S. exports of typewriter parts constituted between 40 and 56 percent of U.S. shipments during the period 1967-70. From \$20.2 million in 1967, exports increased irregularly to \$31.0 million in 1970 and then declined to \$28.7 million in 1971.

Calculators

Combined apparent U.S. consumption of electronic and electro-mechanical calculators increased during 1967-71 from 228,000 units, valued at \$83.9 million, in 1967 to 518,000 units, valued at \$158.7 million, in 1971. During this period, however, U.S. consumption of electronic calculators increased sharply, while consumption of electro-mechanical calculators declined.

Taking advantage of U.S.-manufactured integrated circuits developed in connection with computer and aerospace programs in the late 1950's and early 1960's, the Japanese electronics industry was able, primarily because of lower labor costs in Japan, to produce electronic calculators at a substantially lower cost than U.S. manufacturers could. As a result, Japan became the leading producer of electronic calculators in the late 1960's and maintains this position at present.

Recent technological advances in the United States, however, are enabling the U.S. producers to become competitive in the world electronic-calculator market. For example, at least one U.S. firm has announced a retail price of \$99.50 for a U.S.-made electronic calculator, whereas 6 months ago this same type of calculator sold for about \$150.00 or more.

Electronic calculators.--As shown in table 7, apparent U.S. consumption of electronic desk-type calculators increased rapidly in 1967-71, from * * * units in 1967 to 424,000 units in 1971, or by more than * * * fold. During the same period U.S. consumption of these calculators increased in value from * * * million to \$116.3 million,

or by more than * * * fold. The ratio of imports to consumption of electronic desk-type calculators, in terms of units, increased from 17 percent in 1967 to 67 percent in 1969, and leveled at 77 percent in 1970 and 1971.

U.S. producers' shipments of electronic desk-type calculators increased from * * * units in 1967 to 128,000 units in 1971 (table 7). The value of these shipments increased from * * * million in 1967 to \$60.8 million in 1971.

Exports of electronic desk-type calculators during 1967-71 increased from * * * units, valued at * * *, in 1967 to 29,000 units, valued at \$11.5 million in 1971 (table 7). * * *.

Electronic hand-held calculators were first produced in the United States in significant quantities in 1971. In that year, however, imports supplied 94 percent of apparent U.S. consumption of such calculators (table 8). In 1971, U.S. shipments of hand-held calculators amounted to * * * units, valued at * * * million (table 8). However, it is apparent that U.S. production of this item is increasing rapidly and will be far greater in 1972 than it was in 1971.

There were no exports of electronic hand-held calculators prior to 1971. In that year fewer than 500 units, valued at * * *, were exported.

Electro-mechanical calculators.--The apparent U.S. consumption of electro-mechanical calculators increased slightly, from * * * units in 1967 to * * * units in 1968, and then declined steadily to * * * units in 1971 (table 9). The value of consumption of such calculators dropped steadily from \$72.4 million in 1967 to * * * million in 1971.

Shipments of electro-mechanical calculators by U.S. producers during 1967-71 followed the same general trend as apparent U.S. consumption, decreasing steadily from 162,000 units, valued at \$66.9 million, in 1967 to * * * units, valued at * * * million, in 1971 (table 9).

Annual exports of electro-mechanical calculators remained constant at about 30,000 units, valued at about \$10 million, from 1967 to 1969 (table 9). However, exports dropped significantly in 1970 and 1971, reaching a low of 7,000 units, valued at \$2 million, in the latter year.

U.S. Imports

Typewriters

Six major foreign-based companies currently import typewriters into the United States. U.S. imports for consumption of all typewriters increased almost steadily during the period 1967-71. From 1.8 million units, valued at \$60.5 million, in 1967, such imports rose to 2.2 million, valued at \$87.3 million, in 1971 (tables 1 and 2). Based on quantity, these imports accounted for 71.5 percent of total U.S. consumption in 1970 (the latest year for which data on consumption are

available). Based on value, they accounted for 21.0 percent of total U.S. consumption in 1971, whereas in 1967, they had accounted for 12.7 percent of the total.

U.S. imports of nonelectric office typewriters of the type made at Remington Rand's Elmira, N.Y., plant more than tripled in terms of quantity and more than doubled in terms of value during the period 1967-71 (table 3). From about 98,000 units, valued at \$7.2 million, in 1967, these imports rose to about 339,000 units, valued at \$14.8 million in 1971.

Imports of nonelectric office typewriters from Japan, ostensibly the principal foreign source in terms of quantity, amounted to 141,227 units, valued at \$629,167, in 1971. In terms of value, in 1971 Japan was fourth behind West Germany (\$7.0 million), the United Kingdom (\$3.6 million), and Italy (\$530,283). The low unit value of these typewriters from Japan (\$4.46), however, compared with the next lowest unit value for such typewriters from a major foreign source (\$36.47), indicates that probably the great bulk of the imports from Japan were toy typewriters.

Between 1967 and 1971 imports of electric office typewriters increased from 77,279 units, valued at \$11.1 million, to 251,328 units, valued at \$30.9 million (table 4).

U.S. imports of portable typewriters were 1.6 million units, valued at \$42.2 million, in 1967, dropped to 1.3 million units, valued at about \$33 million, in 1968, and rose thereafter to 1.6 million units, valued at \$41.7 million, in 1971 (table 5). The principal source for

imports of portable typewriters in 1971 was Japan, with about 799,000 units, valued at \$16.4 million.

Typewriter parts

U.S. imports of typewriter parts increased irregularly in value from \$906,000 in 1967 to \$7.3 million in 1970 and dropped to \$6.8 million in 1971 (table 6).

Calculators

Aggregate imports.--Very few electronic calculators were imported before 1967. In that year imports of electronic desk-type calculators amounted to a little more than * * * units, valued at * * * million; they increased rapidly to about 325,000 units, with a value of \$67.0 million in 1971 (table 7). * * *. The principal supplier of these calculators during 1967-71 was Japan.

Electronic hand-held calculators were first imported into the United States in 1970. In that year fewer than * * * units, valued at * * *, were imported, but in the following year about * * * calculators, valued at * * * million, were imported (table 8). Three foreign importers, (* * *) accounted for about * * * percent of the total. Imports entered by three U.S. producers (* * *) constituted nearly all of the remainder.

Imports of electro-mechanical calculators increased from about * * * units, valued at * * * million, in 1967 to about * * * units, valued at * * * million, in 1969 and decreased to about * * * units,

valued at * * * million, in 1971 (table 9). The decrease in these imports reflects the continuing replacement of electro-mechanical calculators by electronic calculators.

Department of Commerce statistics indicate that the total value for imports of all types of calculators increased from \$15,000 in 1947 to \$162.3 million in 1971. In 1964, the first year for which unit statistics were reported, 148,000 units, valued at \$20.0 million, were imported. The large increase in both quantity and value from 1968 through 1971, are due to the rapidly increasing imports of electronic calculators. In 1971, imports were 1.6 million units, valued at \$162.3 million (table 10).

Imports under TSUS item 807.00 1/.--* * * * *

1/ 807.00 imports are articles imported into the United States after having been assembled abroad in whole or in part of fabricated components, the product of the United States. For a complete definition, refer to Tariff Schedules of the United States Annotated (1972), p. 528.

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Sperry Rand Corp.

Sperry Rand Corp., of which Remington Rand is a division, is a multinational conglomerate with headquarters in New York City. In 1971 it had operations in 21 States and 15 foreign countries. The corporation ranked 63d in the 1971 Fortune directory of the 500 largest U.S. industrial corporations, with total sales of \$1,739 million for all of the firm's worldwide operations during the fiscal year ended March 31, 1971. Defense-and space-related activities accounted for 22 percent of total 1971 sales. In March 1971 Sperry Rand employed 87,401 workers throughout the world; * * *. Its diverse operations are organized into seven manufacturing divisions: the New Holland Division, the Remington Electric Shaver Division, the Remington Rand Division, the Sperry Division, the Sperry Flight Systems Division, the Univac Division, and the Vickers Division.

Remington Rand has been manufacturing typewriters since 1873. In 1955 it merged with the Sperry Gyroscope Co. to form the Sperry Rand Corp. Remington Rand became the Remington Rand Division of Sperry Rand.

Annual sales of all products by Sperry Rand Corp. for the fiscal years ended March 31, 1967-71, are as follows: 1967, \$1,487 million; 1968, \$1,562 million; 1969, \$1,607 million; 1970, \$1,755 million; and 1971, \$1,739 million.

The Remington Rand Division

The Remington Rand Division of Sperry Rand Corp. is the only division manufacturing typewriters, typewriter parts, and electronic calculators. Currently, the division operates plants in Elmira, N.Y., Naples, Italy, and Denbosch, Holland. * * *

The Elmira, N.Y., plant

The Elmira plant, with a total area at present of about 1 million square feet, was initially opened in late 1935. At one time it produced portable and office typewriters, but in recent years has manufactured only electric and nonelectric office machines; portable typewriters, currently the largest component of U.S. typewriter sales by dollar volume, are no longer made. The plant produced electro-mechanical calculators from 1941 to 1971, and electronic desk-type calculators from 1968 through mid-1971.

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STATISTICAL APPENDIX

Table 1.--Typewriters: U.S. shipments, imports for consumption, exports of domestic merchandise, and apparent consumption, 1967-71

(Quantity in thousands of units; value in thousands of dollars)

Year	U.S. shipments	Imports	Exports	Apparent consumption	Ratio (percent) of imports to consumption
Quantity					
1967-----	1,928	1,805	126	3,607	50.0
1968-----	1,842	1,640	129	3,353	48.9
1969-----	1,627	1,852	86	3,393	54.6
1970-----	912	2,061	89	2,884	71.5
1971-----	<u>1/</u>	2,228	69	<u>1/</u>	<u>1/</u>
Value					
1967-----	436,054	60,455	20,022	476,487	12.7
1968-----	444,794	63,756	18,392	490,158	13.0
1969-----	416,629	68,115	15,878	468,866	14.5
1970-----	416,340	91,240	17,265	490,315	18.6
1971-----	340,316	87,301	12,061	415,556	21.0

1/ Not available.

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

Table 2.--Typewriters: U.S. imports for consumption, 1950-71

Year	Quantity				Value			
	Standard		Portable	Total	Standard		Portable	Total
	Non-electric	Electric			Non-electric	Electric		
	1,000 units	1,000 units	1,000 units	1,000 units	1,000 dollars	1,000 dollars	1,000 dollars	
1950	1/	1/	1/	23	1/	1/	1/	1,746
1951	1/	1/	1/	36	1/	1/	1/	2,762
1952	1/	1/	1/	31	1/	1/	1/	2,196
1953	1/	1/	1/	74	1/	1/	1/	4,586
1954	1/	1/	1/	105	1/	1/	1/	5,503
1955	1/	1/	1/	144	1/	1/	1/	7,726
1956	1/	1/	1/	276	1/	1/	1/	12,798
1957	1/	1/	1/	338	1/	1/	1/	16,955
1958	1/	1/	1/	391	1/	1/	1/	19,626
1959	1/	1/	1/	469	1/	1/	1/	22,294
1960	166	7	436	609	9,810	724	16,048	26,582
1961	81	8	727	816	7,178	1,520	24,443	33,141
1962	77	5	911	993	5,261	813	26,407	32,481
1963	49	5	669	723	2,994	791	17,327	21,112
1964	62	31	1,082	1,175	5,532	5,508	26,210	37,250
1965	120	39	1,289	1,448	8,451	6,764	31,843	47,058
1966	133	58	1,565	1,756	9,293	9,061	40,258	58,612
1967	98	77	1,630	1,805	7,243	11,054	42,158	60,455
1968	106	253	1,281	1,640	6,003	24,793	32,960	63,756
1969	151	195	1,506	1,852	10,934	19,584	37,597	68,115
1970	280	217	1,564	2,051	17,443	33,253	40,544	91,240
1971	339	251	1,638	2,228	14,753	30,887	41,661	87,301

1/ Not available.

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

Table 3.--Office typewriters, nonelectric: U.S. imports for consumption, by principal sources, 1967-71

Principal sources	1967	1968	1969	1970	1971
Quantity (units)					
West Germany----	61,535	41,162	61,888	77,816	66,146
United Kingdom--:	5,535	33,155	46,348	110,700	66,381
Switzerland-----:	4,588	3,259	4,362	10,161	7,081
Canada-----:	2,583	2,563	4,341	9,899	5,446
Italy-----:	333	21	4,256	15,031	5,317
Netherlands-----:	175	17,381	18,984	2,043	332
Japan <u>1</u> /-----:	13,308	3,422	1,956	29,605	141,227
All other-----:	9,989	5,198	8,764	25,210	47,554
Total-----:	98,046	106,161	150,899	280,465	339,484
Value					
West Germany-----:	\$5,491,985	\$3,383,697	\$5,103,250	\$7,605,357	\$6,984,175
United Kingdom--:	89,451	220,862	2,442,618	5,237,045	3,629,936
Switzerland-----:	448,736	329,434	502,314	1,178,211	897,223
Canada-----:	284,897	227,788	460,862	647,680	362,595
Italy-----:	16,063	1,966	403,330	1,420,068	530,283
Netherlands-----:	6,606	1,449,584	1,535,626	174,289	12,109
Japan <u>1</u> /-----:	198,063	44,619	33,889	149,590	629,167
All other-----:	707,303	344,716	451,777	1,030,650	1,707,477
Total-----:	7,243,104	6,002,666	10,933,666	17,442,890	14,752,965
Unit value (per typewriter)					
West Germany-----:	\$89.25	\$82.20	\$82.46	\$97.74	\$105.59
United Kingdom--:	16.16	6.66	52.70	47.31	54.68
Switzerland-----:	97.81	101.08	115.16	115.95	126.71
Canada-----:	110.30	88.88	106.16	65.43	66.58
Italy-----:	48.24	93.62	94.77	94.48	99.73
Netherlands-----:	37.75	83.40	80.89	85.31	36.47
Japan <u>1</u> /-----:	14.88	13.04	17.33	5.05	4.46
All other-----:	70.81	66.32	51.55	40.88	35.91
Average-----:	73.87	56.54	72.46	62.19	43.46

1/ The great bulk of imports from Japan are probably toy typewriters.

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

Table 4.--Office typewriters, electric: U.S. imports for consumption, by principal sources, 1967-71

Principal sources	1967	1968	1969	1970	1971
Quantity (units)					
West Germany----	39,712	60,794	83,802	130,419	108,164
United Kingdom--	1,383	9,811	13,984	2,997	16,113
Switzerland-----	2,062	1,445	1,498	1,334	2,066
Canada-----	6,400	21,758	24,301	24,310	7,985
Italy-----	6,207	55,776	21,590	15,510	33,890
Netherlands-----	2,979	27,894	21,673	3,197	2,093
Japan-----	13,137	25,921	17,267	32,627	60,842
All other-----	5,417	49,643	10,962	6,669	20,175
Total-----	77,297	253,042	195,077	217,063	251,328
Value					
West Germany-----	\$7,116,007	\$9,634,162	\$9,813,947	\$25,736,707	\$19,607,780
United Kingdom--	119,696	716,207	805,751	233,956	940,516
Switzerland-----	349,648	281,744	268,630	262,153	383,463
Canada-----	707,276	2,202,719	2,358,054	2,148,281	778,166
Italy-----	563,819	3,547,861	2,278,570	1,819,315	4,307,173
Netherlands-----	576,531	2,436,602	1,828,493	391,690	255,025
Japan-----	977,276	1,788,566	1,164,190	1,747,019	2,662,702
All other-----	643,791	4,184,722	1,066,717	913,937	1,952,617
Total-----	11,054,044	24,792,583	19,584,352	33,253,058	30,887,442
Unit value (per typewriter)					
West Germany-----	\$179.19	\$158.47	\$117.11	\$197.34	\$181.28
United Kingdom--	86.55	73.00	57.62	78.06	58.37
Switzerland-----	169.57	194.98	179.33	196.52	185.61
Canada-----	110.51	101.24	97.04	88.37	97.45
Italy-----	90.84	63.61	105.54	117.30	127.09
Netherlands-----	193.53	87.35	84.37	122.52	121.85
Japan-----	74.39	69.00	67.42	53.55	43.76
All other-----	118.85	84.30	97.31	137.04	96.78
Average-----	143.01	97.98	100.39	153.20	122.90

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

Table 5.--Portable typewriters (electric and nonelectric): U.S. imports for consumption, by principal sources, 1967-71

Country	1967	1968	1969	1970	1971
	Quantity (units)				
United Kingdom---	201,803	204,530	313,720	262,352	358,670
Netherlands-----	343,500	156,684	109,305	176,800	153,452
West Germany-----	110,699	101,656	101,023	69,374	76,563
Spain-----	113,073	100,067	128,555	145,209	117,208
Japan-----	645,000	592,258	746,164	790,026	799,194
Italy-----	129,545	28,630	13,862	11,005	15,214
All other-----	86,845	96,942	92,990	109,485	118,083
Total-----	1,630,465	1,280,767	1,505,619	1,564,251	1,638,384
	Value				
United Kingdom---	\$5,022,213	\$5,334,448	\$8,323,652	\$6,608,702	\$7,412,844
Netherlands-----	10,687,289	4,487,678	2,797,761	4,595,272	3,695,216
West Germany-----	5,019,833	4,391,479	4,479,404	3,243,709	5,549,586
Spain-----	4,347,315	3,567,785	3,847,174	4,037,697	4,112,367
Japan-----	8,302,910	10,884,337	14,547,589	17,679,847	16,405,796
Italy-----	5,748,468	879,787	702,497	727,920	771,782
All other-----	3,030,433	3,414,513	2,898,972	3,650,488	3,713,084
Total-----	42,158,461	32,960,027	37,597,049	40,543,635	41,660,675
	Unit value (per typewriter)				
United Kingdom---	\$24.89	\$26.08	\$26.53	\$25.19	\$20.67
Netherlands-----	14.62	28.64	25.60	25.99	24.08
West Germany-----	45.35	43.20	44.34	46.76	72.48
Spain-----	38.45	35.65	29.93	27.81	35.09
Japan-----	12.87	18.38	19.50	22.38	20.53
Italy-----	44.37	30.73	50.68	66.14	50.73
All other-----	34.90	35.22	31.18	33.34	31.44
Average-----	25.86	25.74	24.97	25.92	25.43

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

Table 6.--Typewriter parts: U.S. shipments, imports for consumption, exports of domestic merchandise, and apparent consumption, 1967-71

Year	U.S. shipments	Imports	Exports	Apparent consumption	Ratio of imports to consumption
	<u>1,000 dollars</u>	<u>1,000 dollars</u>	<u>1,000 dollars</u>	<u>1,000 dollars</u>	<u>Percent</u>
1967-----	50,571	906	20,194	31,283	2.9
1968-----	49,504	1,253	23,960	26,797	4.7
1969-----	47,072	2,539	20,271	29,340	8.7
1970-----	55,310	7,341	30,953	31,696	23.0
1971-----	<u>1/</u>	6,819	28,656	<u>1/</u>	<u>1/</u>

1/ Not available.

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

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Table 10.--All types of calculators: U.S. rates of duty and imports, 1947-71

Year	Rate of duty	Imports	
		Quantity	Value
		<u>1,000</u> <u>units</u>	<u>1,000</u> <u>dollars</u>
1947-----	25% ad val.	1/	15
1948-----	15% ad val.	1/	109
1949-----	do.	1/	178
1950-----	do.	1/	1,732
1951-----	12-1/2% ad val. <u>2/</u>	1/	2,215
1952-----	do.	1/	4,413
1953-----	do.	1/	2,497
1954-----	do.	1/	2,055
1955-----	do.	1/	2,814
1956-----	11-1/2% ad val. <u>3/</u>	1/	5,515
1957-----	11% ad val. <u>4/</u>	1/	5,285
1958-----	10-1/2% ad val. <u>5/</u>	1/	5,311
1959-----	do.	1/	8,205
1960-----	do.	1/	12,802
1961-----	do.	1/	15,626
1962-----	do.	1/	19,053
1963-----	do.	1/	22,881
1964-----	do.	148	19,999
1965-----	do.	175	24,596
1966-----	do.	273	36,273
1967-----	do.	392	49,931
1968-----	9% ad val.	556	73,979
1969-----	8% ad val.	868	108,139
1970-----	7% ad val.	1,291	158,051
1971-----	6% ad val.	1,589	162,339

1/ Not available.

2/ Effective June 6, 1951.

3/ Effective June 30, 1956.

4/ Effective June 30, 1957.

5/ Effective June 30, 1958.

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

Note.--The data in this table represent the total imports reported in the official statistics under TSUSA items 676.2020, 676.2040, 676.2060, and 676.2080 for the years 1967-68 and under TSUSA items 676.2010, 676.2025, 676.2045, 676.2065, and 676.2085 for the years 1969-71.

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