The Speed Intensity of Hong Kong's Manufactured Cotton Exports Relative to Japan during the Post-War Take-Off Period

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Olds (forthcoming) used the air-sea freight shipping choice to argue that the south Chinese economies, such as Hong Kong had a comparative advantage in producing speed-intensive goods, that is, goods that quickly lose value due to changing fashion and technology. Japan showed this comparative advantage to a much more limited extent. This paper uses a monthly data set which divides 1957-1962 U.S. cotton imports into 117 categories to show that Hong Kong's manufactured cotton exports to the U.S. were concentrated in volatile categories which showed large month-to-month change in the quantity imported into the U.S. Furthermore, Hong Kong exports were concentrated in those import categories in which up-to-date (month-old versus two-month-old) information most improved an observer's ability to predict a dimension of product quality (lbs per unit). Japan's apparel exports to the U.S. tended to be in volatile categories, but overall Japan's manufactured cotton exports to the U.S. were not speed intensive.

JEL classification: F10, N75, Z13

1. Introduction

During the last half of the twentieth century, one of the world's most important economic stories has been the rise of the Chinese economies: First Hong Kong in the 1950s followed by Taiwan in the 1960s and China itself in the 1980s Olds (forthcoming) argues that the Chinese economies had a comparative advantage in production for speed-intensive markets, i.e. markets in which demand for particular goods quickly changes due to fashion (as in apparel or toy markets) or technological change (as in electronic markets). This comparative advantage arises due to the type of business networks used in these economies.[1] When transportation and communications technology (primarily international air travel and telephone service) developed to the point that speed-intensive goods became traded goods, the comparative advantage held by the Chinese business networks in these economies suddenly became of great value. Earlier research examined net exports in broad 2- and 3-digit SITC categories and estimated speed intensity by the propensity to ship exports in each category by air.

During the period in which Hong Kong first began exporting significant amounts of textiles and textile products to the U.S., from 1957 to 1962, the U.S. census bureau did a special study of manufactured cotton imports into the U.S. This detailed monthly survey (FT-130) allows us to test new ways of determining speed intensity and confirm that Hong Kong's manufactured cotton exports to the U.S. were speed intensive compared to the manufactured cotton exports to the U.S. from other countries, most notably Japan. During the period observed, Hong Kong was second to Japan in exporting manufactured cotton goods to the U.S. Olds (forthcoming) showed that during this period, Japanese net exports were speed-intensive relative to the rest of the world, but not to the same degree that Hong Kong and, later, the other Chinese economies would exhibit.

After a brief overview of East Asian textile exports to the U.S. during the post-war period in section two, section three introduces the data set which will be used. In section four, monthly volatility within the 117 cotton manufacturing categories is measured and used as a simple instrument to indicate speed intensity—the importance of change in market demand to the individual producers. This estimate shows that Hong Kong's manufactured cotton exports tended to be in more volatile sub-categories than those of Japan or the rest of the world. Section five uses a more

[1] For out purposes, the key difference between business networks is the number of connections per businessperson and the amount invested in each connection. Feenstra and Hamilton offer a concrete analysis of Chinese business networks and how they differ from Korean and Japanese networks.

complex measure of speed intensity: The importance of up-to-date information in predicting changes in a dimension of quality, unit weight. The findings in this section are similar to (but stronger than) those found in section four. Section six concludes.

2. Background

After WWII, Japan and Hong Kong became Asia's primary textile and textile product exporters. For Japan, the export of cloth and yarn was a continuation of the pre-war pattern. Japan had a long history of exporting cotton yarn and cloth to Asian countries and exporting silk to the U.S. For Hong Kong, exporting yarn and cloth was largely a new business. Neither country had exported much apparel before the war. International trade in apparel in the pre-war period was rare. People throughout most of the world wore home-made or locally tailored clothes. The U.S. and Great Britain had important ready-made clothes markets but production of ready-made clothes was concentrated within small areas of New York and London, respectively (Godley 1996). Since firms that tried producing ready-made clothes outside these cities usually failed, the idea of massively importing ready-made clothes from Asia would have seemed completely impractical. Only toward the end of the pre-war period did U.S. apparel production gradually move out of New York City into the adjoining regions and then, in the 1950s, spread to the southern states (Bonacich and Waller [1994b], 81).

Post-war growth in exports of apparel and cotton cloth is shown in table one. In 1952, when the Japanese economy was taking off, Japan's exports of cotton cloth were much more important than its apparel exports. But while cotton cloth was primarily being exported to Japan's traditional Asian export markets, Japan's new post-war apparel exports were largely sold in the increasingly important U.S. market. Hong Kong exported slightly more apparel than Japan, but Hong Kong's apparel exports were still limited primarily to Asian markets as was its slightly larger export of cotton cloth. These patterns remain evident in 1956, Both Hong Kong and Japan experienced strong growth in exports during the 1952-1956 period but growth in apparel exports was clearly greater than cotton cloth exports in both economies, especially in Japan whose reliance on the apparel markets in the developed world was increasing. Hong Kong had already begun exporting to Britain by this time buy still sold little in U.S. markets. After 1956, Hong Kong's exports to the U.S. increased rapidly and Hong Kong became the second largest exporter to the U.S. of textile and textile products. The number of garment workers in Hong Kong soared from 4,261

in 1955 to 51,918 in 1960 (Lau and Chan, 113). Partly this was due to restrictions placed on Japanese exports to the U.S. negotiated in 1957. Hong Kong also faced restrictions on the growth of its exports to the U.S. beginning in 1961 (Bonacich and Waller [1994a], 26). Hong Kong differed from Japan in that Hong Kong imported large quantities of textiles. In fact, Hong Kong imported more yarn and cloth than it exported. Thus while Japan's apparel exports were processed domestic cloth, Hong Kong's apparel was often made with imported cloth and this cloth was frequently imported from Japan.

The only other Asian country with significant textile and textile product exports to the U.S. in the 1950s was the Philippines. Originally this ex-colony of the U.S. exported considerably more textile and textile products to the U.S. than Hong Kong. But its exports, mainly made-up goods, grew at a slower rate and they were already being surpassed by Hong Kong.

3. Data

From July 1957 to September 1962 (the period in which Hong Kong was first establishing itself in the U.S. marketplace) the U.S. Bureau of the Census did a survey of manufactured cotton imports into the United States (United States Department of Commerce, Bureau of the Census). Except for the period October-December 1957, when three months of data were compiled together, the data were reported monthly. Each monthly report stated the amount and value of the cotton manufactures in each category that was imported from each country. During the survey, ninety-seven countries exported cotton manufactures to the U.S. in 137 categories. Since minor adjustments were made in the categories at several times, this study combines some of the categories for continuity. Thus, in this revised data set, we use 117 categories. The categories of goods are divided into five groups: (1) yarn and cloth (24 categories), (2) made-up goods, such as blankets, sheets, towels or handkerchiefs (18 categories), apparel, not knit or crocheted (51 categories), (4) knit goods, such as sweatshirts, hose or underwear (21 categories) and (5) miscellaneous, such as rugs or waterproofed cloth (3 categories). The values of the yarn and cloth group and the apparel, not knit or crocheted, group were considerably greater than the other three groups. There were no interesting differences between the relatively small made-up goods and miscellaneous goods groups, so this paper combines these categories into one larger miscellaneous group. Furthermore the small knit goods group was consolidated with the non-knit apparel group. Within the various categories, quantities were usually stated in pieces, dozens, square yards or pounds. Many of

the categories used two quantity measures: pounds and one other measure.[2] Figure one shows total imports into the U.S. during this period by group. During this time the annual value of cotton textile imports to the U.S. from the rest of the world more than doubled in value, from $144 million (in the first 12 months) to $300 million (in the last 12 months). The miscellaneous goods group shows a gradual rise, but it is the yarn and cloth group and the apparel group that are largely responsible for the growth in U.S. manufactured cotton imports. These two groups show both a strong upward trend and a cyclical component that roughly tracks the change in the growth rate of U.S. nominal GDP. Table two shows from where the imports came. The two major exporting countries were Japan and Hong Kong. Together these accounted for half of U.S. imports. Western Europe, taken as a unit, was the third major source of imports. The third ranked country was the Philippines which was responsible for over 40% of the imports that did not come from the above three sources. Other East Asian countries which would later become important, such as Taiwan and South Korea, were still small exporters at this point. As the table shows, Hong Kong differed from Western Europe in that it specialized in apparel while Western Europe exported cloth and miscellaneous products. Japan was an intermediate case having large exports in all groups. The Philippines exported made-up goods and some forms of apparel such as gloves, brassieres and handkerchiefs. The last two columns of the table show the source of imports during the first twelve months and the last twelve months of the period observed. Imports from Japan rose at a much slower rate than imports generally so that Japan's share of the market fell from almost half to roughly one-third. This may have been primarily due to U.S. restrictions on the growth rate of Japanese manufactured cotton exports. Western Europe and the Philippines market share also declined during this period although at a slower rate. Hong Kong's share of the market was greatest during the middle of this period, around 1960, and then fell back slightly but still remained almost doubled what it had been in the first year. The most impressive rate of growth, however, was among smaller importers such as India, Egypt, Jamaica and Taiwan.

4. Market Volatility

Speed intensity refers to the importance of speed in production. Some markets are relatively stable. To make a profit, the producer has to concentrate primarily on

[2] Details of how value, quantities, origin, etc. were determined can be found in the report, several samples of which are posted on my website. The raw data is also being posted on my website.

producing a good-quality product at a low cost. Understanding of the market is relatively unimportant compared with the ability to organize an efficient production process. In speed-intensive sectors of the economy, demand for the particular items being produced quickly "melts." A toy linked to a particular movie, for example, may sell very profitably for a few months, but soon most of the leftover toys will end up in the remainder bin selling for a loss. In these markets, entrepreneurship trumps organization. A producer who can quickly obtain and correctly process market information will make more money than a slow-reacting producer who specializes in optimizing the production process. The first producer's products may be of lower quality and cost a bit more, but they are ready while demand still exists.

Observers, Sit and Wong or Yu for example, have often argued that Hong-Kong-style production is speed intensive, but operationalizing the concept of speed intensity is not easy given the data found in most data sets.[3] Olds (forthcoming) used a data set that categorized imports by mode of transport and judged speed intensity of U.S. imports by their propensity to be shipped by air given their unit weight. By this measure, Hong Kong's overall net exports were more speed intensive than Japanese net exports. One problem with this method is that some type goods were so heavy they were always shipped as ocean freight while other lightweight goods were always shipped by air. The monthly data set used in this paper makes possible other means of estimating speed intensity. Since markets requiring speed-intensive production are quickly changing markets, volatility may be one simple indicator of speed-intensity. In some categories, the quantity of manufactured cotton imports into the U.S. changed little from month to month, while in other categories the quantity imported was quite variable. The first hypothesis this paper tests is whether imports to the U.S. from Hong Kong were associated with volatile import categories.

There are a number of ways volatility can be defined. This paper calculates the proportional change in quantity from month to month when the quantity rises (using the first unit of quantity given in the reports) and the reciprocal of that change when the quantity falls. Since, in some volatile categories, the quantity could fall to a very small number and then rise by a proportionately huge amount, unduly influencing a category's average volatility rating, each proportionate monthly change was assigned to one of eight ordered categories according to its magnitude. These categories are

[3] Abernathy, et.al., operationalize the concept of speed intensity by observing "lean retailing" and "replenishability." They find that in the 1990s, the need for speed was moving production from East Asia to Mexico since it was quicker to transport goods to the U.S. from Mexico. The Abernathy, et.al., findings do not really contradict the findings of this paper. During the earlier post-war period, Latin American producers faced problems that slowed their response time so as to more than offset their advantage in transportation speed (Morawetz). Business networks compete to increase the speed with which they process information and produce products. As this speed increases, the speed of transportation grows relatively more important.

shown in table three.[4] Some categories were much broader than other categories and these big categories had less volatility just because they were big, i.e. much of the volatility was internalized. To control for this problem, instead of just looking at average volatility in each category, a regression was run including a set of dummies representing each category and the lagged log of the total value of imports for each observation.[5] Furthermore a time trend was added since there seemed to be a small secular decline in volatility over this period. The coefficients for the category dummies were then used as the volatility index.[6] These index numbers ranged from 4.59 to 6.95 with a mean of 5.48 and a standard deviation of 0.49.[7]

Given volatility index numbers for each category of goods, one can determine the average market volatility faced by the basket of goods being exported from each country. The average market volatility faced by goods imported to the U.S. from Hong Kong, Japan and the rest of the world is shown in table four. Apparel and yarn and cloth were the most volatile groups[8] and miscellaneous imports were least volatile. Overall U.S. imports from Hong Kong were in the most volatile markets. Yarn and cloth and miscellaneous imports from Hong Kong were also in more volatile markets than those of either Japan or the rest of the world. Japan showed a much lower volatility rating in these groups, but in the apparel group, imports from Japan were in somewhat more volatile markets than Hong Kong while the rest of the world clearly specialized in non-volatile markets. Hong Kong had a higher volatility rating overall, not only because of its high volatility ratings in the yarn and cloth and miscellaneous groups but also because a larger proportion of its exports to the U.S. were in the more volatile apparel group. A GLS regression was run on the 240 (3X80) total observations using each category's volatility index as the dependent variable, place dummies as the independent variables and the value of goods imported to the U.S. by each place in each category as weights. Overall, Hong Kong and Japan were significantly different from the rest of the world at the 99% and 90% levels, respectively. The difference between Hong Kong and Japan was not statistically significant.

Another way to picture the different specialization of the exporters is to rank the categories of cotton manufactured imports to the U.S. by volatility and then divide

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[4] Note that each time imports in a category fell from a positive amount to zero, this was recorded as a category 7 change. But when imports restarted, a proportionally infinite jump, this was simply recorded as a missing value and not assigned to any category.

[5] Another possibility would be to use the average value for each import category instead of the changing monthly value. I use the monthly value since some import categories grew greatly over the period.

[6] Only the largest 80 categories were used in the calculation. These categories contained over 99% of the imports.

[7] The volatility index numbers for some of the largest categories of goods are shown in table five in the following section.

[8] If one further divides apparel into knit and non-knit, knit apparel shows low volatility.

these categories into three roughly equal size (by value) groups so that the highly volatile categories (containing roughly 1/3 of the U.S. imports by value) are in the top group and the low volatility categories are in the bottom group. The high volatility group consisted of 33 categories. The largest five categories—carded sheeting, blouse and blouse-skirt sets, women and children's slacks, coats and blouse-trouser and blouse-shorts sets—contributed 49% of the group's value. Figures two through four show how Hong Kong, Japan and the rest of the world differed in the volatility of their exports over time. In almost every month, high volatility exports to the U.S. from Hong Kong were greater in value than either the medium or low volatility exports. 51% of Hong Kong's exports belonged to this category. The high volatility exports to the U.S. were also clearly cyclical, with big surges during periods when the U.S. economy was growing fastest. Japan's exports were divided fairly even between the three categories and there was no clear cyclical pattern. 28% of Japan's exports were in the high volatility group. For the rest of the world, only 21% of exports were in the high volatility group, but this group did start growing in size during the first boom period beginning in late 1959.

5. Speed Intensity Estimated Using Unit Weight

Goods are speed intensive when their quality must rapidly change in accordance with market demand. Among the imports in this sample, 34% are contained in categories in which two units of measure for quantity are recorded—typically number of units and weight or square yardage and weight. Thus one dimension of quality, unit weight, is recorded monthly and one can observe how quickly this quality dimension changes and, more importantly, the extent to which up-to-date information improves one's estimate of future change. If Hong Kong's "guerrilla capitalists" (Lam and Lee) could react quicker to market change than Japanese businesses, then Hong Kong's exports should tend to be in categories in which quality change has an important random-walk component. In these markets, the ability to notice a change and react quicker than other businesses is important and can make up for shortcomings in the production process that may lead to somewhat higher costs or lower quality.

To measure the importance of quality change within each category, two sets of regressions are run. Both regression sets use lagged data to predict the average unit weight of goods in each category at each point in time. The first set of regressions uses data two and three months previous to the dependent variable along with a time trend. This represents the best guess that can be made concerning unit weight with two-month-old data. However, if one can obtain and process data fast enough, one

may be able to make use of more recent data. Similarly, if one can quickly alter one's production line, one may not have to make decisions so far in advance. In both cases, one may be able to use data that is only one month old. The second set of regressions is the same as the first except that it adds in newer one-month-old data to improve the model's predictive power. If the improvement in predictive power for a category is large, then this category of goods is considered speed intensive.
In formal terms, the two regressions can be written as:

$$(1) \qquad Y_t = A_0 + A_2 y_{t-2} + A_3 y_{t-3} + A_4 t + e_t$$

$$(2) \qquad Y_t = A_0 + A_1 y_{t-1} + A_2 y_{t-2} + A_3 y_{t-3} + A_4 t + \varepsilon_t$$

Y_t is the unit weight at time t. When lagged data is missing, the regression uses the last available data if this data is less than four months old. Only categories with at least 36 months of data were used. Since the importance of estimating the quality dimensions of a category is proportional to the value of the category at the time, the regression is weighted by the total value of the observed category during each month. This is a weighted least-squares regression and for simplicity we are assuming that the square of the error term is what the businesses want to minimize. The speed intensity of each category is estimated by subtracting the squared error term (divided by the squared average unit weight of the category) from regression set (2) from the equivalent term from regression set (1) for each observation. A value-weighted average of the improvement in unit-weight estimation for each observation in each category is then calculated to determine the speed-intensity index number for the category. Since the regressions are the same except that one more term has been added to the second set of regressions, the index number will always be positive. To help the reader judge the reasonableness of the results arrived at by this procedure table five shows the speed intensity rankings for the largest import categories (those with total world imports into the U.S. over the period exceeding US$5 million). Except for carded sheeting, the most speed intensive categories were clothing categories. Except for knit shirts, non-speed-intensive categories were cloth categories. In general (machine) knit clothing tended to be standardized clothing whose unit weight changed little.
Once the speed intensity of each category has been estimated, the average speed intensity of the basket of goods produced in each economy can be calculated. The results are shown in table six. The definition of what constitutes a market is somewhat arbitrary, so this table is broken into three sections. The top section

assumes that the market which producers seek to understand is defined by the total imports of goods into the U.S. in each category. Thus worldwide imports into the U.S. are used to estimate speed intensity. This includes a large variety of goods in each category and some of these goods may be extraneous goods that do not really compete with goods from Japan and Hong Kong. The middle section uses only goods imported into the U.S. from Asia. Fewer extraneous goods are included here, but some competitor's goods are probably not being included. Finally, the bottom section uses only imports from Hong Kong to estimate the speed intensity of Hong Kong's markets and imports from Japan to estimate the speed intensity of Japanese markets. The first two sections of the table are quite similar. Hong Kong's basket is most speed intensive and Japan's basket is least speed intensive with the rest of the world an intermediate case. We run a GLS regression taking each of the import categories from each place as an observation: 130 (41+44+45) observations in total. Each category's speed intensity index number was used as the dependent variable. The independent variables were the place dummies and the values of goods imported to the U.S. by each place in each category were used as weights. Overall, using world imports, Hong Kong was significantly more speed intensive than Japan and the rest of the world at the 99% level and Japan was significantly less speed intensive than the rest of the world at the 90% level. For cloth and yarn, using world imports, Hong Kong was significantly more speed intensive than Japan and the rest of the world at the 99% and 90% levels, respectively, and Japan was significantly less speed intensive than the rest of the world at the 95% level. For apparel, using world imports, Hong Kong was significantly more speed intensive than the rest of the world at the 95% level. Using only Asian imports, Hong Kong and the rest of Asia were both more speed intensive than Japan overall and in the yarn and cloth category at the 99% level. Hong Kong and Japan together exported over 80% of the textile and textile products being sent to the U.S. from Asia. The rest of Asia can be split into two groups. Taiwan, South Korea and Pakistan were more speed intensive than Hong Kong while India was almost as speed intensive as Hong Kong. This group contributed roughly 40% of the non-Hong Kong non-Japan imports from Asia to the U.S. Virtually all the remaining imports to the U.S. from Asia came from the Philippines or Okinawa and these economies were less speed intensive than Japan. When one uses only own-exports to the U.S., Hong Kong's yarn and cloth exports are more speed intensive than Japan's at the 99% level but other differences are not statistically significant. This bottom section of the graph is problematic. The problem is that Hong Kong's exports in many categories were too sporadic to yield a speed intensity estimate.[9]

[9] A possible alternative to unit weight as a quality dimension is unit price. The problem with unit

As in the previous section, another way to observe speed-intensity specialization is to rank the cotton manufactured imports to the U.S. categories by speed intensity[10] and then divide these categories into three roughly equal-size (by value) groups so that the most speed-intensive categories are in the top group and the least speed-intensive categories are in the bottom group. Then we observe imports into the U.S. from Hong Kong, Japan and the rest of the world in these three categories over time. This set of figures, five through seven, looks roughly similar to the figures showing volatility. As figure five shows, throughout this period Hong Kong exported a disproportionately large amount of goods from the most speed intensive categories and these exports were cyclical. 68% of the Hong Kong exports for which unit weight could be calculated fell into the high-speed-intensity category. For Japan the proportion is only 18%.

6. Conclusions

Olds [forthcoming] shows that overall Hong Kong had a comparative advantage in categories that were speed intensive, i.e. apparel, shoes, toys, etc. This paper shows that within one very important category of export goods, manufactured cotton goods, Hong Kong particularly specialized in the goods which were relatively speed intensive. The most direct measure of speed intensity, which used unit weight, gave the clearest results showing Hong Kong's exports to be much more speed intensive than both Japan's exports and those of the rest of the world. The greatest difference was in yarn and cloth. Japan's yarn and cloth exports were among the world's least speed intensive, but Japan's apparel exports were relatively more speed-intensive and measured by volatility were even more speed-intensive than Hong Kong's apparel exports.

Hong Kong's apparel exports did not peak in real value until the 1980s. But while the real value of Japan's yarn and cloth exports to the U.S. would continue growing into the 1980s, Japan's apparel exports increased little after 1962 and by the early 1970s Japan was importing more apparel than it exported. One could thus argue that, while Japan may have pioneered speed-intensive apparel exports immediately after the war when its economy was still in flux, by the 1960s it was discovering that its

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price is that it not only shows quality change, but also reflects changes in demand and supply. Businesses naturally want to predict changes in supply and demand conditions as much as they want to predict quality changes, but since Hong Kong and Japan are large importers there may be a serious endogeneity problem. Individual Hong Kong producers are small, but Japanese exporters are large and often cooperated. I have run regressions on unit price parallel to the regressions run in this section on unit weight. Overall, the unit-price regressions show that Hong Kong's export basket is more speed intensive than Japan's basket, but Japan's apparel exports appear somewhat more speed intensive than Hong Kong's apparel exports.

[10] In this case, worldwide imports are used.

long-term comparative advantage laid elsewhere. During this later period, Japanese trading companies began using their knowledge of U.S. apparel markets in cooperation with the more flexible Taiwanese and Korean apparel producers (Feenstra and Hamilton).

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Table one. Japan and Hong Kong's apparel and cotton cloth exports, 1952-1961.

Economy	Year	1952	1956	1961
Japan	Cotton Cloth Exports	$197,653,000	$293,468,000	$347,722,000
	Cotton Cloth Exports to the U.S.	$5,121,000	$45,070,000	$27,530,000
	Apparel Exports	$42,489,000	$134,892,000	$191,076,000
	Apparel Exports to the U.S.	$20,292,000	$75,337,000	$81,504,000
Hong Kong	Cotton Cloth Exports	$47,223,000	$70,690,000	$83,408,000
	Cotton Cloth Exports to the U.S.	$0	$0	$11,679,000
	Apparel Exports	$43,976,000	$76,869,000	$152,606,000
	Apparel Exports to the U.S.	$499,000	$3,236,000	$46,252,000

All values in 1961 U.S.$ (using the CPI). Cotton cloth is SITC #652. Apparel (non-fur) is SITC #841. Note that in this table apparel includes non-cotton apparel. Calculated from United Nations, Department of Economic and Social Affairs

Table two. Manufactured Cotton Imports by Source, July 1957 to September 1962 (in 1,000,000 US$)

Source	All Cotton Imports	Yarn & Cloth	Miscel-laneous	Apparel	First Year	Second Year
Japan	379.1 (34.3%)	123.0 (32.6%)	68.3 (34.3%)	187.8 (35.6%)	70.8 (49.9%)	100.4 (33.4%)
Hong Kong	232.6 (21.1%)	41.9 (11.1%)	8.5 (4.2%)	182.2 (34.5%)	13.2 (11.0%)	63.7 (21.2%)
Western Europe	319.1 (28.9%)	152.0 (40.3%)	90.4 (45.3%)	76.6 (14.5%)	22.1 (29.8%)	82.8 (27.5%)
Philippines	71.5 (6.5%)	0 (0.0%)	20.9 (10.5%)	50.6 (9.6%)	5.3 (7.2%)	17.8% (5.9%)
Other	101.8 (9.2%)	60.1 (16.0%)	11.3 (5.7%)	30.4 (5.8%)	1.5 (2.1%)	35.8 (11.9%)
Total	1104.1 (100.0%)	377.1 (100.0%)	199.4 (100.0%)	527.6 (100.0%)	74.1 (100.0%)	300.4 (100.0%)

Nominal values are used in this table. Over the period, 1957-1962, the CPI rose a little over 7%. Calculated from United States Department of Commerce, Bureau of the Census.

Table three. The volatility rating system.

Index number assigned	Value of the present month compared to the previous month
0	From 20/21 to 21/20 of the previous month’s value
1	(1) More volatile than above and (2) from 10/11 to 11/10 of the previous month’s value
2	(1) More volatile than above and (2) from 4/5 to 5/4 of the previous month’s value
3	(1) More volatile than above and (2) from 2/3 to 3/2 of the previous month’s value
4	(1) More volatile than above and (2) from 1/2 to 2/1 of the previous month’s value
5	(1) More volatile than above and (2) from 1/3 to 3/1 of the previous month’s value
6	(1) More volatile than above and (2) from 1/5 to 5/1 of the previous month’s value
7	(1) Less than or equal to 1/5 of the previous month’s value or (2) greater than or equal to 5 times the previous month’s value

Table four. The volatility index, overall and by group.

Economy	**Overall**	**Yarn & Cloth**	**Apparel**	**Miscellaneous**
Hong Kong	5.554	5.606	5.558	5.213
	(0.043)	(0.041)	(0.062)	(0.089)
Japan	5.453	5.373	5.624	5.124
	(0.045)	(0.063)	(0.065)	(0.056)
Rest of the World	5.343	5.495	5.357	5.077
	(0.041)	(0.076)	(0.056)	(0.058)

The index is calculated under the assumption that the time is January 1958 and total monthly imports in each category are US$200,000 (roughly the overall average of the sample). Standard errors are in parenthesis. Calculated from United States Department of Commerce, Bureau of the Census.

Table five. Speed intensity and volatility indices for categories with two measures of quantity and over US$5 million in total imports.

Category	**Total Imports (in US$ millions)**	**Speed-Intensity Index Number**	**Volatility Index Number**
Dressing Gowns, Robes, etc., nkoc	7.0	0.19097	-0.0065
Sheeting, carded	55.1	0.17672	0.4339
Coats, nes, nkoc, no	18.9	0.14130	0.5641
Nightwear, nkoc, no	19.3	0.08413	0.3017
Dresses, nes, nkoc	6.5	0.01906	-0.0104
Raincoats, 3/4 length or longer, no	43.4	0.01492	-0.0845
Twill & Sateen Cloth, carded	15.9	0.01401	0.2601
Poplin & Broadcloth, carded	13.7	0.01045	-.1278
Playsuits, Sunsuits, etc., nkoc, nes	18.5	0.00866	0.0835
Yarn-Dyed Fabrics, except Ginghams, carded	17.6	0.00456	-0.3005
Poplin & Broadcloth, combed	19.5	0.00307	0.0224
Quilts or Bedspreads	6.0	0.00073	-0.5509
Shirting, Jacquard or Dobby, combed	7.3	0.00062	-0.287
Yarn-Dyed Fabrics, except Gingham, carded	16.1	0.00012	0.0077
Gingham Cloth, carded	19.8	0.00006	-0.2298
Gingham Cloth, combed	39.2	0.00002	0.0254
Knit shirts, nes, no	17.0	0.00002	0.0241

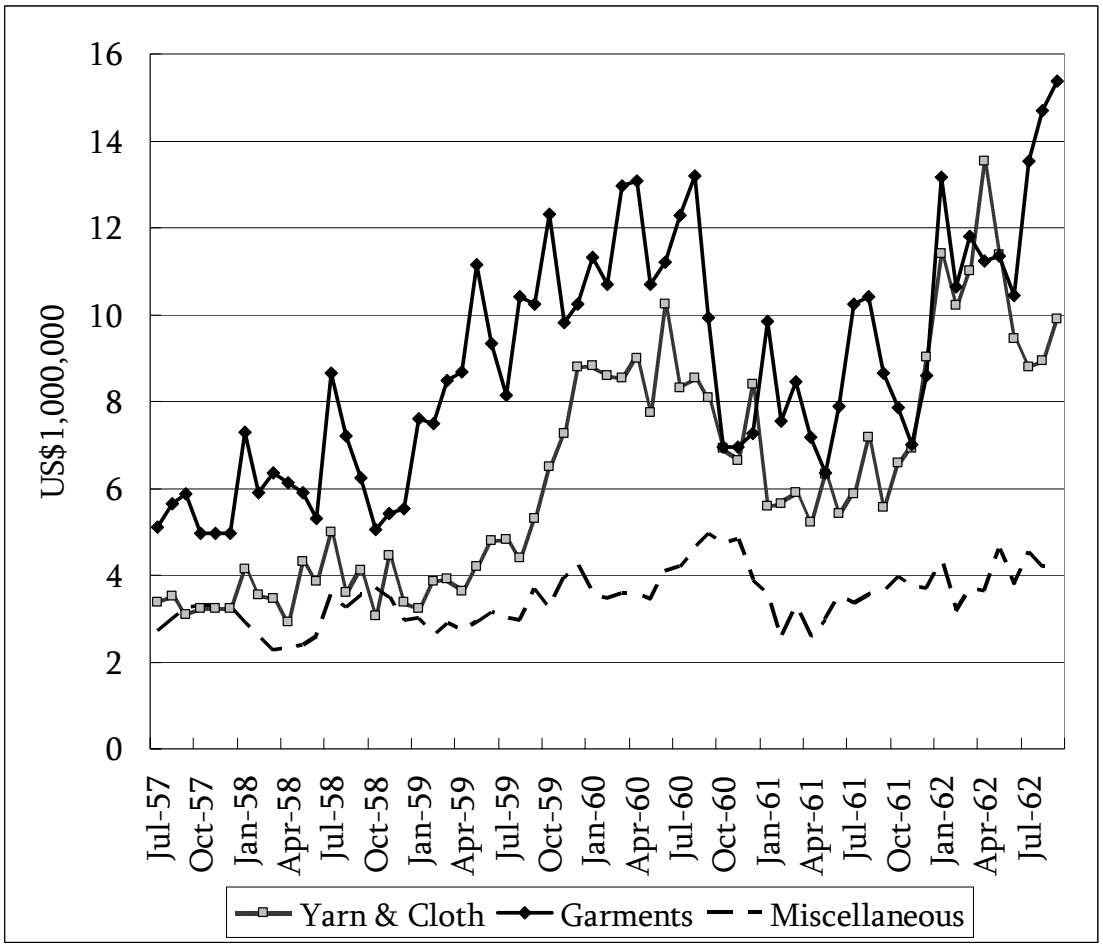
Abbreviations: “nes” not enumerated separately, “nkor” not knit or crocheted, “no” not ornamented. “Combed” and “carded” refers to the yarn used. Calculated from United States Department of Commerce, Bureau of the Census.

Table six. The speed-intensity index, overall and by group

Economy	**Overall**	**Yarn & Cloth**	**Apparel**	**Miscellaneous**
Using World Imports				
Hong Kong	0.00953 (0.00124) *41*	0.01204 (0.00227) *13*	0.00766 (0.00135) *24*	0.00697 (0.00679) *4*
Japan	0.00250 (0.00080) *44*	0.00141 (0.00113) *14*	0.00527 (0.00139) *23*	0.00081 (0.00144) *7*
Rest of the World	0.00485 (0.00113) *45*	0.00621 (0.00225) *14*	0.00337 (0.00129) *24*	0.00436 (0.00415) *7*
Using Only Asian Imports				
Hong Kong	0.00948 (0.00136) *34*	0.01320 (0.00262) *12*	0.00738 (0.00133) *18*	0.00030 (0.00018) *4*
Japan	0.00251 (0.00088) *38*	0.00146 (0.00125) *13*	0.00530 (0.00163) *18*	0.00041 (0.00011) *7*
Rest of Asia	0.00842 (0.00233) *36*	0.01312 (0.00268) *12*	0.00364 (0.00406) *18*	0.00026 (0.00004) *6*
Using Own Imports				
Hong Kong	0.00440 (0.00123) *19*	0.00198 (0.00068) *3*	0.00683 (0.00175) *14*	0.00058 (0.00095) *2*
Japan	0.00243 (0.00105) *35*	0.00026 (0.00016) *12*	0.00756 (0.00244) *16*	0.00062 (0.00067) *7*

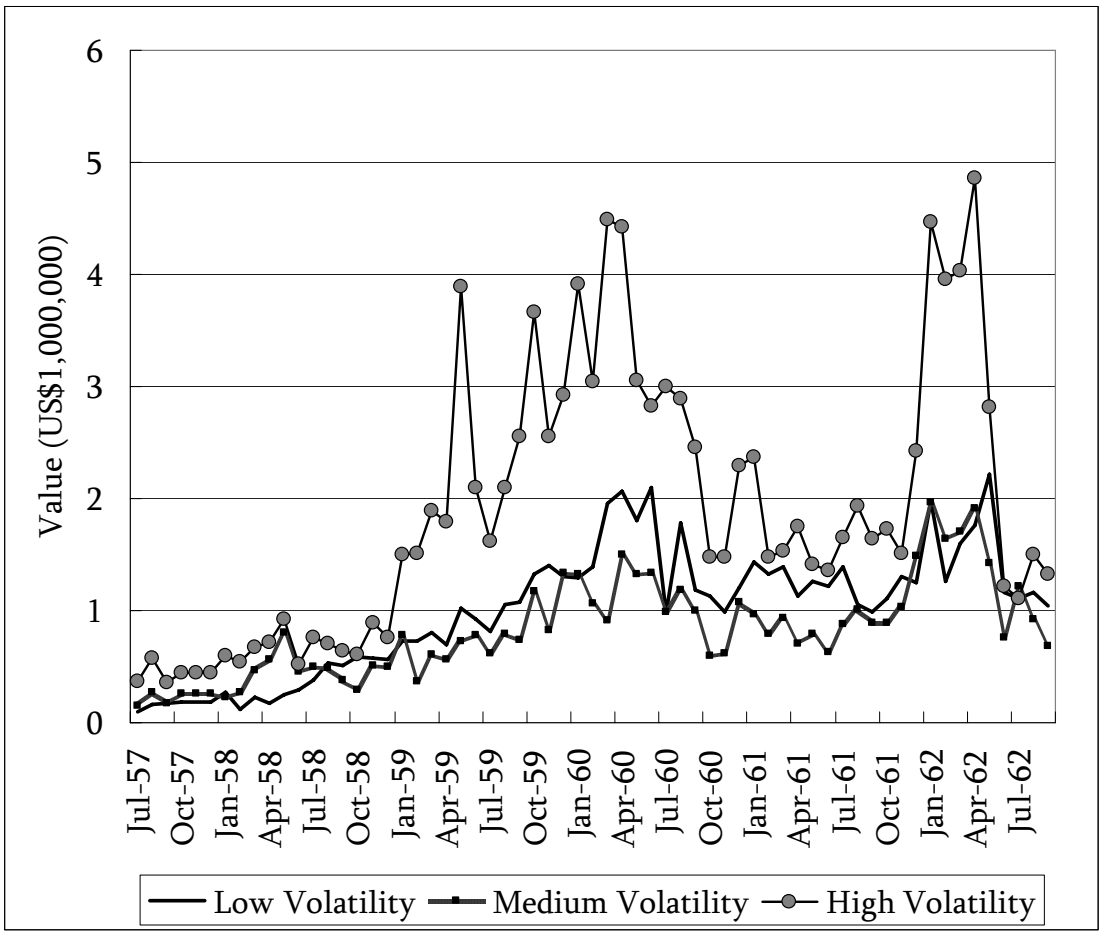
Standard errors are in parenthesis. Number of observations is in italics. Calculated from United States Department of Commerce, Bureau of the Census.

Figure one. Total cotton manufacture imports into the United States by group, July 1957 to September 1962



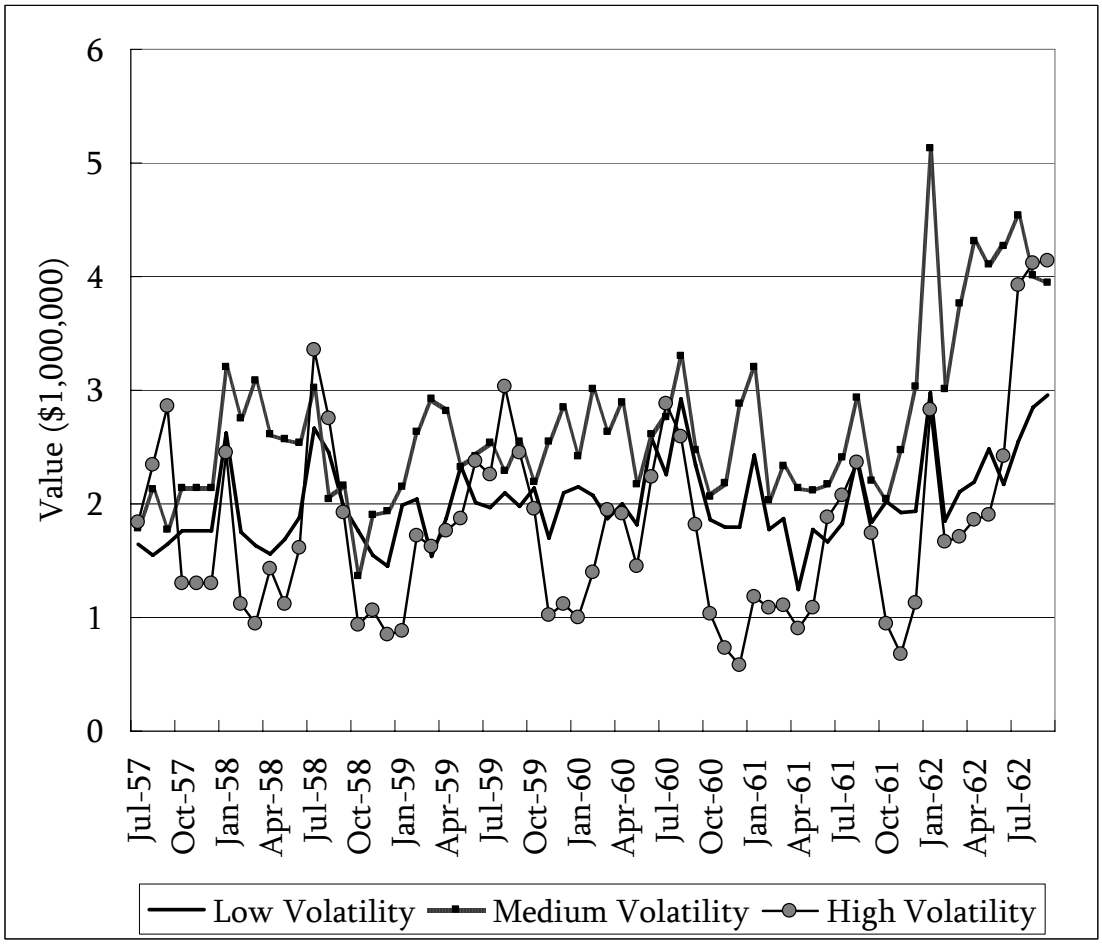
Calculated from United States Department of Commerce, Bureau of the Census.

Figure two. Distribution by volatility group of imports from Hong Kong over time.



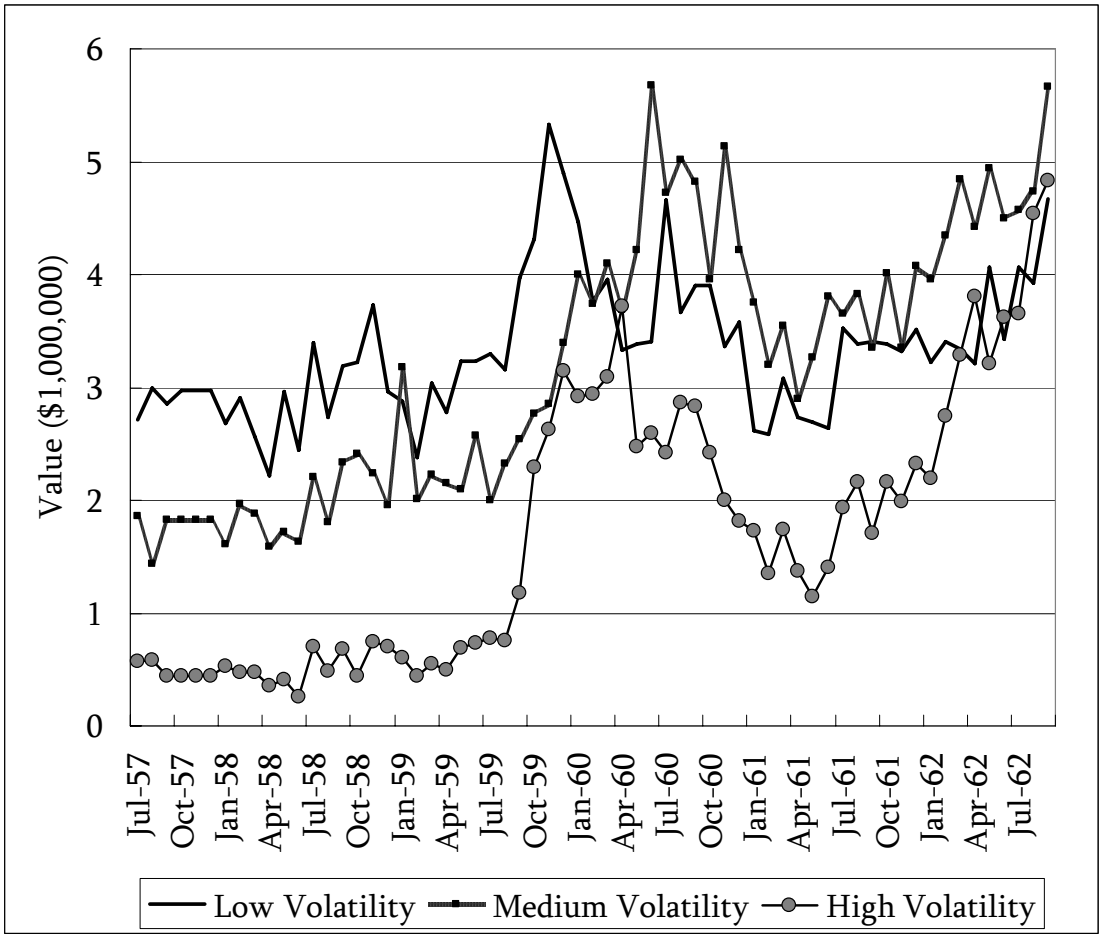
Calculated from United States Department of Commerce, Bureau of the Census.

Figure three. Distribution by volatility group of imports from Japan over time.



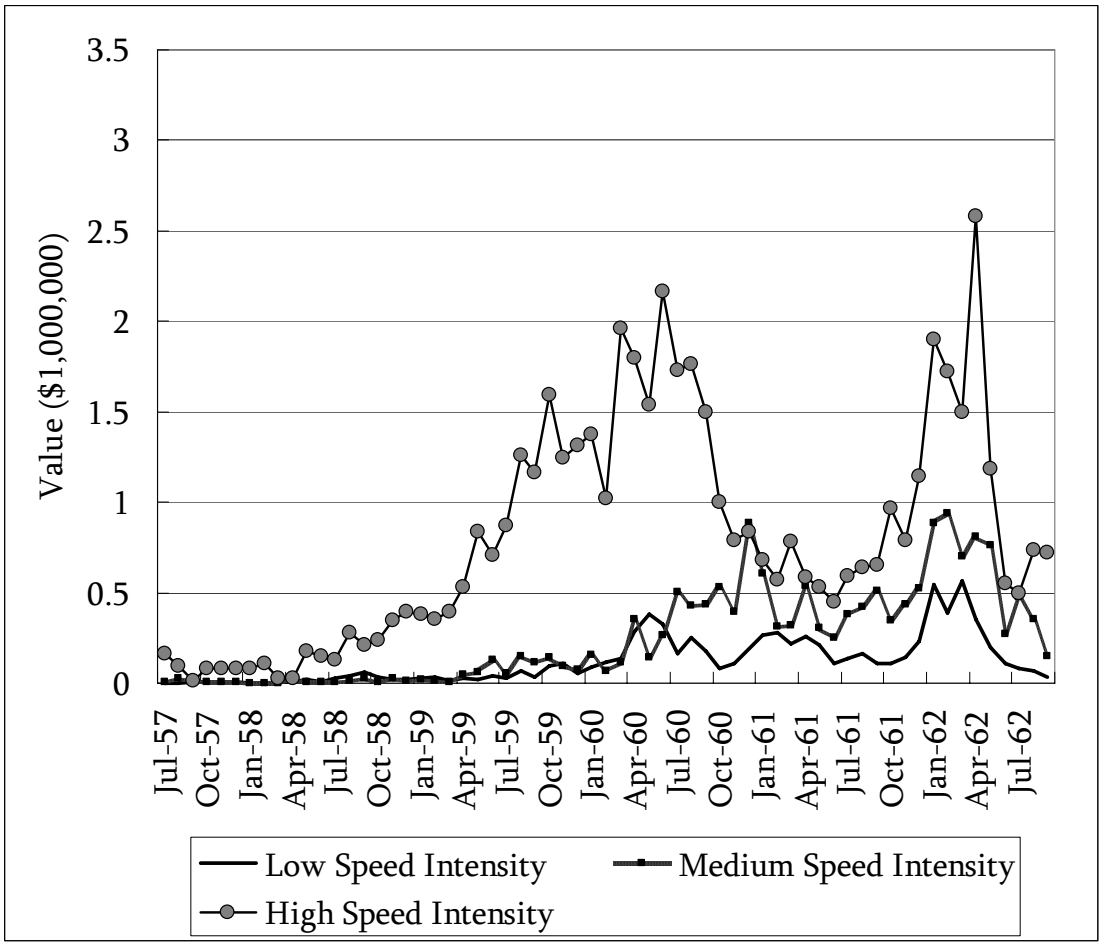
Calculated from United States Department of Commerce, Bureau of the Census.

Figure four. Distribution by volatility group of imports from the rest of the world over time.



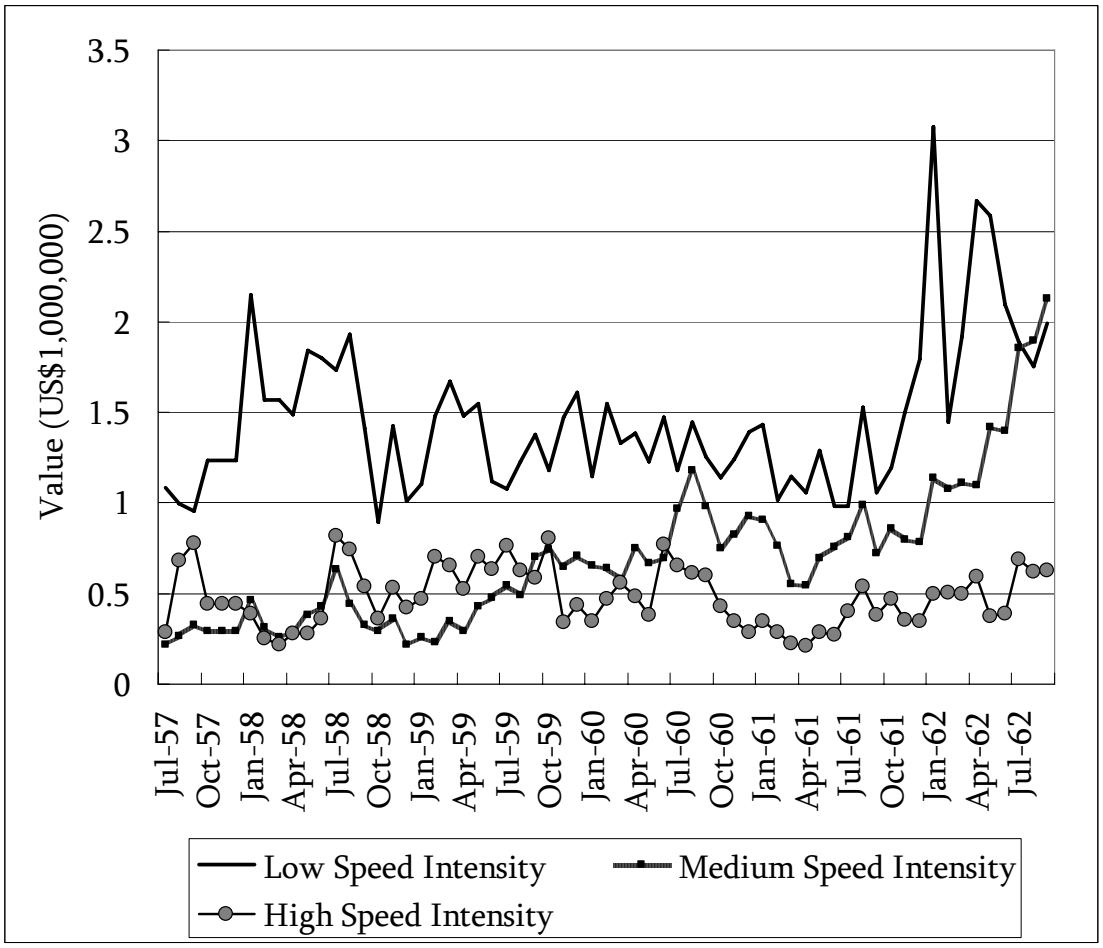
Calculated from United States Department of Commerce, Bureau of the Census.

Figure five. Distribution by speed-intensity group of imports from Hong Kong over time.



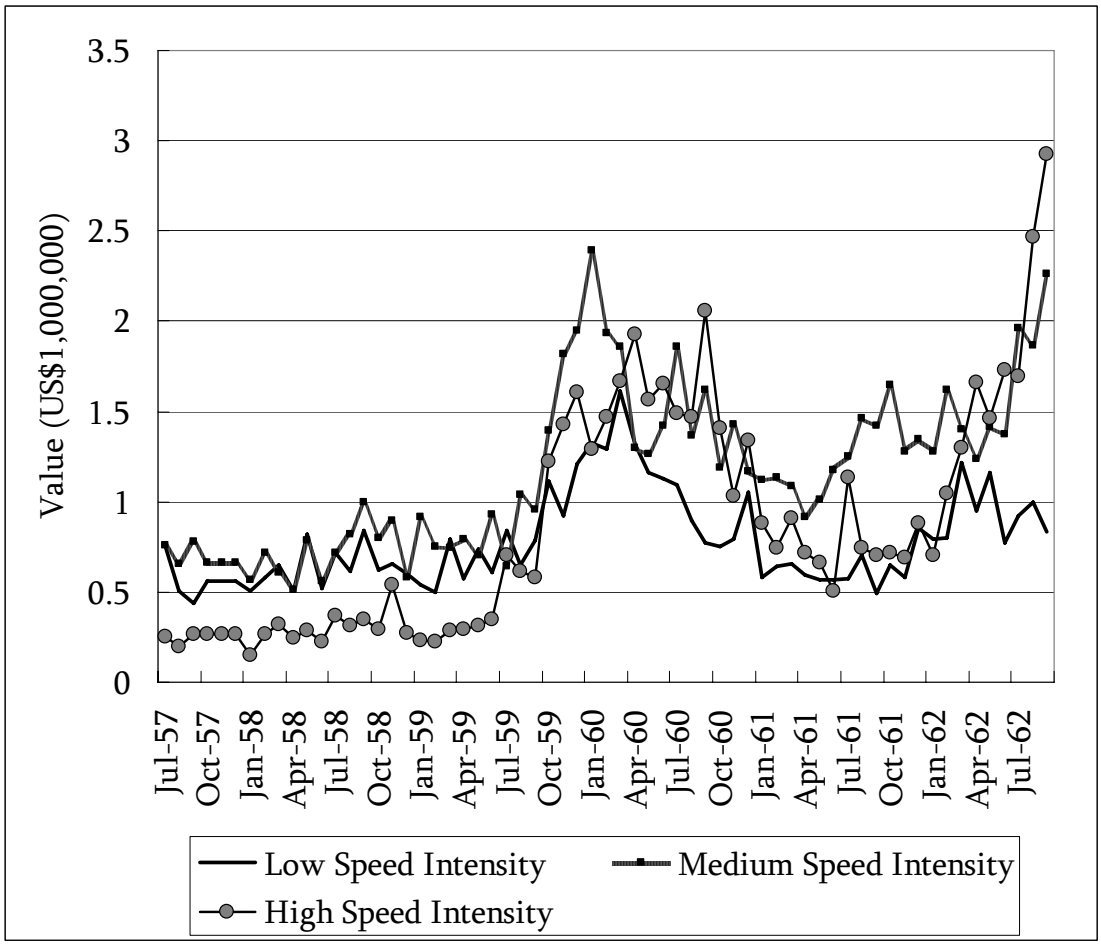
Calculated from United States Department of Commerce, Bureau of the Census.

Figure six. Distribution by speed-intensity group of imports from Japan over time.



Calculated from United States Department of Commerce, Bureau of the Census.

Figure seven. Distribution by speed-intensity group of imports from the rest of the world over time.



Calculated from United States Department of Commerce, Bureau of the Census.