

*New England*

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## **New England Investment Overseas**

American manufacturers are investing record amounts in new plant and equipment overseas. A survey of New England manufacturers who recently initiated or expanded their overseas investments in the United Kingdom and Common Market countries shows that these outlays are prompted by many considerations. The most important motives are to take advantage of Western Europe's rapid industrial growth and to locate within the Common Market. Other highly important considerations are lower costs and the expansion of commercial connections.

The survey also shows that investment abroad is in part a substitute for exporting from the United States. In various ways, however, foreign investment provides a stimulus to United States exports. Exports of parts and other products manufactured by the parent company in the United States may increase as a result of overseas investment. Furthermore, because of familiar home connections, American firms investing overseas frequently purchase their machinery and other supplies from the United States. The flow of American investment funds has also stimulated the rate of growth in European countries which in turn has stimulated their demand for United States goods.

The effect of overseas investment on the United States balance of payments varies,

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*Also*

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depending upon the time period considered. On balance overseas investments probably depress exports in the short run. In the long run, however, dividends, interest, and royalties from profitable investments abroad will aid our balance of payments position.

Investment overseas by United States manufacturers is estimated by the Department of Commerce to have reached a record \$1.9 billion in 1962. More than half of this total, twice as much as in 1957, was invested in Western Europe as American firms sought increased sales in this expanding market. Sales by American owned manufacturing companies in Europe reached \$10.7 billion in 1961, up 70 percent from 1957. Even with this expansion, however, nonmilitary merchandise exports to Western Europe have continued to rise. Through the third quarter of last year they were 8 percent above the like period in 1961, and were 50 percent higher than in 1959.

To gain some insight into method and motives for overseas investment and to make a comparison with domestic operations, a survey was

undertaken for the Federal Reserve Bank of Boston. Interviews were conducted with the management of 20 New England firms. Each company had established or expanded its manufacturing activities in the United Kingdom or the Common Market during 1958-59. These years were chosen for study so that the investment patterns and motives were recent enough to be relevant and well remembered. At the same time, the period was sufficiently in the past so that some judgment could be made on the basic wisdom of the decision.

### *Foreign Production and United States Exports*

New England exports, reviewed in detail in "New England Products Abroad" in the April 1962 issue of the *New England Business Review*, are an important part of the region's economy. Goods manufactured in New England and exported in 1960 were valued at just over a billion dollars, or 6.6 percent of the national total. At that time machinery, both electrical and nonelectrical, and transportation equipment amounted to over 50 percent of all New England exports.

## CHARACTERISTICS OF FIRMS IN THE SURVEY

The firms in the survey represented a wide range of New England industries investing in overseas plants. In general, they manufactured materials, tools, and machinery. Specifically, they included toiletries, weighing and measuring devices, aircraft and parts, plastics, photographic material, building materials, automotive parts, textile machinery, scientific apparatus, and service industry machinery.

The firms varied greatly in size and structure. Annual net sales of the parent firms ranged from \$1.5 million to \$225 million in 1961 with a median average of about \$30 million. Average full-time employment at home in 1961 ranged from 60 to 4,000 with a median average of about 1,800. Fifteen of the 20 participants were independent; some of these had subsidiaries of their own. Of the other 5, 2 were wholly owned by larger corporations, 1 was jointly owned by 2 larger firms, and 2 were divisions of international corporations. Seventeen companies were profitable and 3 were incurring net losses with 2 of these in reorganization under the Bankruptcy Act.

Altogether, foreign investment by these companies probably represented a capital outflow of at least \$10 to \$12 million. As the size of the survey suggests, this amount represents only a small part of the region's total contribution to overseas investment.

### *Sales and Production Arrangements Overseas*

The survey firms had interests in many different

forms of overseas investment. Apart from sales branch offices, 15 firms had sales agents in countries ranging up to 66 in number. Seventeen of the 20 companies had foreign branches, joint ventures or subsidiaries; 15 had licensing agreements in 1 to 8 countries.

This report was concerned with only one of each firm's overseas ventures. The investment forms studied here included:

- 4 licensing agreements
- 1 joint venture, minority ownership
- 2 joint ventures, 50% ownership
- 3 joint ventures, majority ownership
- 10 wholly owned subsidiaries.

Four of the 5 ventures undertaken by the five smallest firms were licensing agreements, and the fifth was a joint venture growing out of a previous licensing arrangement. Granting a license is of course the least expensive method of foreign market penetration. Besides legal and consultation fees, costs are usually limited to the salaries of advisory technicians and the extension of credit for the licensee's purchase of parts.

Only nine firms were willing to estimate their international sales as a percent of total sales. For these nine, international sales ranged from 3 to 66 percent of total sales.

Five firms estimated that profits on their international investments ranged from 7 to 50 percent of total profits.

In every case but two this was not the first international investment made by the firm.

**MAJOR FACTORS ENCOURAGING INVESTMENT  
ABROAD BY UNITED STATES MANUFACTURERS,  
BY RANK**

- 1 Europe's recent rapid economic growth.
- 2 Present or prospective trade discrimination via tariffs, quotas, etc.
- 3 Present or prospective actions by foreign competitors.
- 4 Lower wage costs.
- 5 Savings on transportation (time and/or cost).
- 6 Present or prospective actions by United States competitors.
- 7 Need to adapt products to foreign market requirements.
- 8 Lower technical and professional salaries.
- 9 Social and/or political pressures to identify with market served.
- 10 Availability of local managerial or technical skills.

Source: Survey of 20 New England manufacturers.

A most striking feature of recent United States export gains is the importance of various types of machinery. Dramatic gains have been scored in such exports as paper-and-packaging machinery, almost every variety of machine tool, electronic computer, measuring and testing device, etc. Hence, New England firms, with their production concentrated in these items, are in a position to participate actively in the Nation's export trade.

Fifteen of the 20 participating firms in the survey were presently engaged in exporting from the United States. Two of the nonexporters had exported until recent foreign investments or licensing arrangements had made it more profitable to serve foreign markets from production facilities abroad. Annual export totals per firm ranged from \$200 thousand to \$15 million.

Two firms reported that their United States exports had actually increased despite their own competitive production overseas. In addition to manufacturing, the foreign facilities provided effective sales support and adequate stocks of replacement parts for the first time. In both cases, the home plant was able to increase its export sales of parts and other auxiliary products as a direct result of its foreign investment.

Investment overseas need not always conflict with the foreign trade of domestic firms. In five cases the foreign market could not have been readily served from plants located in the United States. Excessive shipment costs preclude some

products which are relatively bulky or heavy from entering into foreign trade. Likewise, some products are so labor intensive that they cannot be made profitably in the United States for export at prevailing wage levels. In two cases the restrictions imposed in the foreign market prevented the product from being shipped from the United States.

For example, a manufacturer of aircraft and parts stated that his big customer is located where "buy European" policies prevail. "We'd have needed a certification that the product was so complicated that it could only be produced in the United States. We might have been able to get this but we've been interested in a European venture for a long time and this seemed like a good opportunity."

*Investment Operations*

Investment projects of the firms surveyed were distributed geographically as follows:

United Kingdom	5
Belgium	5
Netherlands	5
Germany	2
France	2
Italy	1

Whatever the investment motive, the relatively advanced technological nature of most of New England's industrial products has confined the region's foreign investment to Europe and Japan. Only those areas have had both the advanced market economy and the necessary labor skills and other services to carry on such operations.

The geographic distribution of foreign investments in the New England survey is actually quite similar to the general pattern of recent United States investment in Europe. In the 1960's Common Market countries have ranked first as the locale of United States manufacturing investment and the United Kingdom third.

In making their investment decisions, the New England firms found the industrial development commissions of the host countries their most helpful source. The commissions' familiarity with local conditions offset their lack of complete objectivity. The firms also spoke highly of the quality of services rendered by America's international commercial banks.

*Motives for Foreign Investment*

Each interviewee was given a list of 14 factors frequently cited as investment motives and asked to list in order of importance those which had influenced his firm's decision to undertake the investment. The desire to be in a market with a high growth rate was the most important fac-

tor encouraging overseas investment. A close second was the fear of present or prospective trade discrimination via tariffs, quotas, etc. As the table on the previous page shows, lower wage, salary, and transportation costs were also highly influential motives.

Almost all the companies agreed that unit costs were — or would be at full production — at least 20 percent below their United States costs. A few companies found the difference as high as 50 percent.

When the respondents were asked what would have been needed to have these export markets served by them from New England, the most frequent reply was that unit costs in New England would have to be cut.

One manufacturer of machine tools replied: "We could have handled all of this business from New England without expanding our plant, but we would have needed at least a 35 to 40 percent reduction in wages. Our labor cost per unit is 3.5 times as great in New England as it is over there, although materials, parts, and power are more costly there. The United States government should have a system of export subsidies like Germany has."

Another said: "We need at least a 50 percent cost reduction. We really feel, though, that we need a Common Market foothold regardless of conditions here in New England."

New England's wage costs in manufacturing are relatively lower than most other regions of the United States, but they are, as the above comments show, higher than in Western Europe.\* This wage differential is narrowing as wage rates in Europe are rising faster than those in the United States. A gap still remains, however. At the present rate of increase in Europe, wages in the United States will continue higher for a long time.

None of the firms surveyed mentioned taxes or burdensome public controls in New England as factors in their decision to invest overseas rather than in New England. The major cost items are apparently transportation and wages.

### *Investment Return*

Thirteen of the 20 overseas ventures have met expectations and have been profitable. None has been or is about to be written off as a failure. A few firms complained of slow production, translating problems, and material delays. Some felt a longer time period was needed for a real appraisal.

All but 1 of the 13 firms with profitable operations in Europe plan to repatriate to the United States earnings not used for reinvestment. This,

\*See "New England at Work in the Space Age," 1961 *Annual Report*, Federal Reserve Bank of Boston.

This article is based on a research report written by David J. Ashton, Professor of International Business at Boston University.

In another Federal Reserve Bank research report, six interview reports have been compiled on the effects of foreign trade on New England manufacturers. These reports were written for the Bank by Raphael W. Hodgson, a member of the staff of Arthur D. Little, Inc.

Copies of both reports are available on request from the Bank's research department.

of course, has a beneficial effect upon the United States balance of payments. The initial investment overseas is a debit item in the balance of payments, but repatriated earnings are a reverse flow, a credit item, in the balance of payments.

### *Effects of Foreign Investment*

Opinions differ sharply as to the effects of manufacturing investment abroad. To some extent and particularly in the short run these foreign investments have been substitutes for exports. Where the product was not available overseas, the immediate demand could have been filled by production in the United States and shipment abroad. In the long run, however, the developing market abroad plus higher costs in the United States would have led to the establishment of plants overseas — if not by American businessmen, then by others.

The effects of overseas investment also differ depending on whether the firm, the employee, or the balance of payments is being considered. For the firm, manufacturing overseas has been profitable. Moreover, commercial connections between domestic and foreign plants have been increased and improved in many cases, leading to additional business. As the New England survey shows, in some cases exports of parts and other products manufactured by the parent company in the United States have increased. In these instances both trade and employment gain because of foreign investment.

To the extent, however, that manufacturing abroad substitutes for exports, these investments reduce employment needs in the United States. Concern about "job exporting" is widespread — particularly because since the end of the Korean War unemployment has remained high even in periods of relative prosperity.

The short run effect of overseas investment on the balance of payments is to contribute to a deficit. But in later years as overseas earnings are repatriated through royalties, interest, and dividends the inflow of funds aids the Nation's balance of payments. Which of these several influences will be the most important during the next decade remains a debatable question.

# Nonelectrical Machinery – A Leader

Among New England's manufacturing industries, nonelectrical machinery registered one of the better performances last year, with employment up 2 percent over 1961. It has become the region's largest manufacturing industry in recent years, whether measured by employment, payrolls, or value of production. This prominence, however, has been overshadowed by the rapid development of its kindred industry, electrical machinery, which contains the glamorous electronic sector.

Recent events suggest that the nonelectrical machinery industry will bear scrutiny in coming months as an indicator of the future course of business. Both in the region and Nation, production in this industry has been at record levels since midyear. New orders, nationwide, have reached record levels in recent months, indicating a pickup in business in coming months.

Changes in machine depreciation practices and the institution of a 7 percent tax credit for new machinery purchases may give the nonelectrical machinery industry a further boost, since it is the primary producer of capital goods. Opinions differ as to the effect these changes will have upon machinery purchases. If the textile industry may be used as an example, however, some added spending is indicated. In textiles, spending plans were revised upward after the change in depreciation guidelines by the Treasury.\*

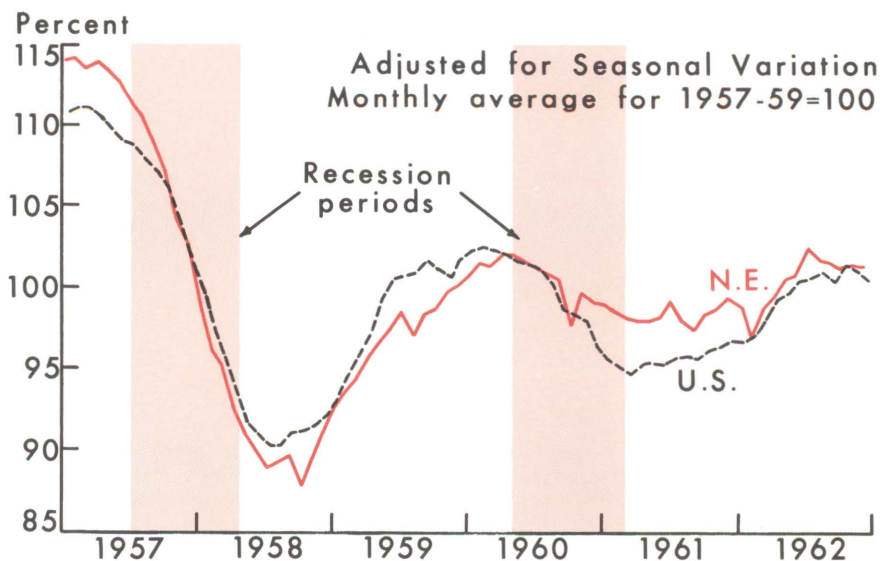
Regional producers of nonelectrical machinery are in the forefront in introducing innovations in machine design. Extremely accurate machine tools controlled entirely by punched tape are being introduced. The region's textile machinery manufacturers are bringing forth new machines with many

automated features. These are finding a ready market as industry strives for greater productivity, lower unit costs, and increased flexibility of operations. A McGraw-Hill survey last fall found the Nation's manufacturers are devoting 18 percent of their capital outlays to automated machinery and equipment. This is a significantly larger percentage than was spent on automation as recently as 1959.

To produce this highly specialized, automated type of machinery, the regional industry requires a highly skilled workforce. Two-fifths of its workers have professional and craft skills. This is 6 percent above the proportion for the industry nationwide. Less than 2 percent are unskilled workers in the regional industry.

Machinists, mechanics, and tool makers account for the bulk, two-thirds, of the skilled craftsmen's jobs in the regional industry. Employer reports from the region's major nonelectrical machinery centers have reported substantial shortages of workers with these skills in recent years, even in periods of relative slack demand. In an attempt to alleviate these shortages, some states in the region have established machinist

Since early 1960 employment in New England's nonelectrical machinery industry has shown a better performance than the industry nationally.



\*See "Stable Business-Rising Capital Outlays," *New England Business Review*, November 1962.

training courses for unemployed workers. The State of Connecticut, for example, instituted such a program in early 1961. Still the need for workers with these skills exceeds the available supply as the industry expands to meet rising demand.

### *Regional Importance of Industry*

New England's nonelectrical machinery industry currently accounts for 11 percent of total manufacturing employment, and for 13 percent of total manufacturing payroll in the region. It spends more for new plant and equipment each year than any other industry in the region. In 1960 and 1961 its outlays amounted to almost \$70 million. Surveys by the Bank indicate that 1962 spending rose to over \$90 million, and that spending will be at least as high this year.

As in the Nation, the most important activity in this industry in New England is the manufacture of metalworking machinery, particularly lathes. The region accounts for about 16 percent of the Nation's metalworking industry. Thirteen percent of the Nation's metal cutting machine tools are produced in New England, along with 30 percent of the machine tool accessories such as drills, cutters, and precision measuring tools.

General industrial machinery comprises the second largest subgroup in New England's nonelectrical machinery industry. Included here is the manufacture of ball and roller bearings, of which the region accounts for more than a fourth of the national production.

Ranking third in the region is special industrial machinery, with primary emphasis given to producing machines for the textile industry. Over two-fifths of the dollar volume of textile machinery shipments in the Nation are from New England.

The above three subgroups account for two-thirds of the region's nonelectrical machinery industry. The remainder of the industry is composed of manufactures of office machines, engines, turbines, etc. Manufacture of construction and farm machinery, which rank high in the Nation, are of minor importance in the region.

### *Recent Performance*

Employment in New England's nonelectrical machinery industry, as the chart on page 5 shows, maintained a higher level over the 1960-61 recession period than did employment nationally. This divergence stemmed from two factors. Nationally, employment in the construction machinery sector, the second largest sector in the national industry, fell by 16 percent between 1960 and 1961. This activity is of minor importance in the region — it accounts for less than

3 percent of total nonelectrical machinery employment — and had, therefore, little depressing effect upon total employment. Moreover, employment in the region's engine and turbine industry increased by 14 percent between 1960 and 1961, whereas nationally employment in this sector fell by 8 percent. The changes in all the other sectors were relatively equal in the region and the Nation over the recession period.

As the recovery proceeded last year, New England's employment continued to show a higher level relative to the Nation. The textile machinery segment of this industry registered a strong performance last year. Iron pourings at the foundries of New England textile machinery producers were up 15 percent over 1961, establishing a new record.

The region's 2 percent increase last year in nonelectrical machinery employment was widespread. Each of the states showed a gain over 1961 levels, with Vermont's 6 percent increase the largest relative gain. Moreover, most of the region's major centers of nonelectrical machinery manufacture such as Bridgeport and Hartford in Connecticut, and the Springfield-Holyoke and Boston areas in Massachusetts registered gains in the range of 1 to 4 percent. The Worcester area was an exception to this trend, however, as employment declined by over 2 percent. New orders remained at low levels throughout most of last year in this area. At the year's end, however, a survey by the Worcester County National Bank found three-fourths of the nonelectrical machinery producers in Worcester County reporting an increase in incoming orders.

Not only did employment increase in New England's nonelectrical machinery industry last year, but average weekly hours per worker also rose. Workweeks averaged 41.8 hours in 1962, a tenth of an hour above the national average, and 2 percent above the 1961 average in the region.

The nonelectrical machinery industry is noted for its large cyclical fluctuations. Swings in business activity in this industry are an exaggerated picture of the cyclical movement of the entire economy. When business is expanding, with profits increasing, industry steps up its replacement of obsolete machines and purchases additional machines to meet the rising demand. When business begins to slacken, on the other hand, orders for additional machines are reduced drastically and manufacturers delay the replacement of obsolete equipment.

Available, current data suggests that the nonelectrical machinery industry is again on the upswing in the region. In addition to rising employment, new orders are showing an increase. In Massachusetts, for example, new orders received by nonelectrical machinery manufacturers

were up 5.4 percent through last November over the like period in 1961, according to a survey by the Associated Industries of Massachusetts. Moreover, many producers in the region report their order backlogs are up substantially.

Given its regional importance and the tendency for it to rise sharply in a period of expansion, the nonelectrical machinery industry will be a major indicator in the months to come of the course of New England's economy.

## Strong Start to Ski Season



Prospects for another record ski season appear strong at this point. Proprietors of New England's ski area lodging places reported gains in occupancy in December and a good supply of advance registrations for January, February, and March.

Reasonably good skiing conditions prevailed in much of western and northern New England during the last half of December. Skiers who had been waiting impatiently for the season to start flocked to the slopes in droves, causing occupancy figures at lodging establishments in December to climb 7 percent above those for December 1961, which had been an excellent month. Only the White Mountains and Monadnock areas of New Hampshire reported declines, attributable to less favorable snow cover than in the other areas. Although both Christmas and New Year's Day were separated from the preceding weekends by an intervening Monday, business this important holiday week was strong. Bitter cold on December 31 caused some people to leave a day earlier than expected but their departure only slightly diminished the month's record.

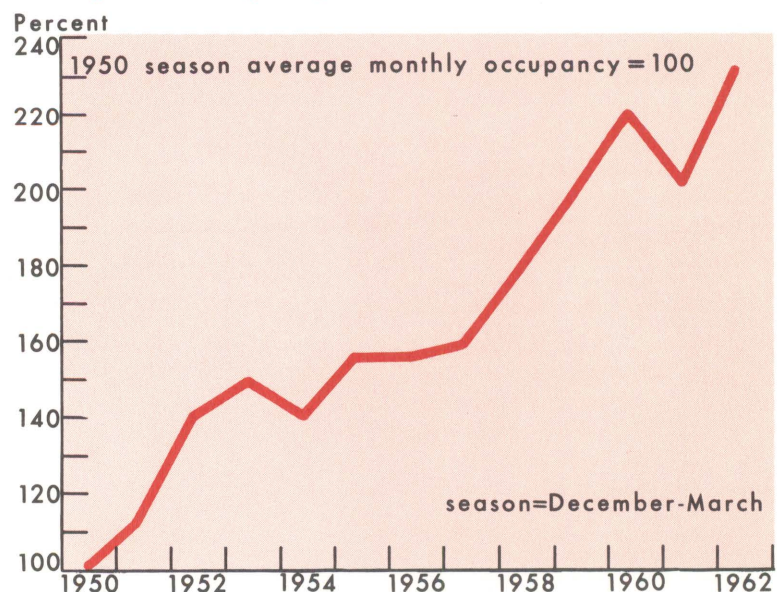
Many new lifts and trails built during the past year are strengthening the appeal of the region to skiers. Over 40 percent of the proprietors reported better advance registrations for January and February than a year ago and 29 percent reported stronger bookings for March. Only about 10 percent reported lower bookings for any of the three months. Good to excellent skiing conditions have been general in January,

strengthening the expectations of gains in the month's business.

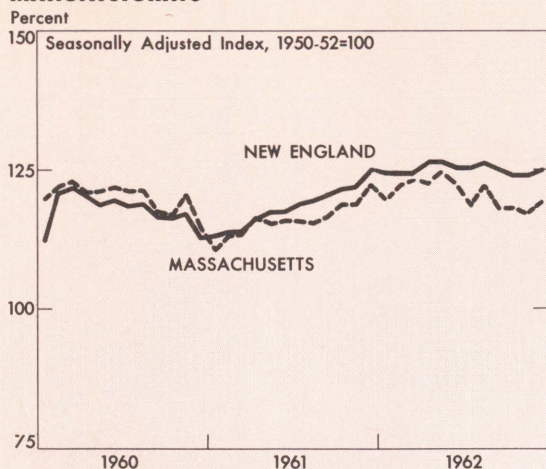
The chart shows the dramatic gain in ski area lodging occupancy during the past 12 seasons. Interruptions in the trend occurred during seasons of poor snow cover. The introduction of snow-making equipment provides insurance against sizable drops of this nature, so long as the winter is cold. Such equipment has also expanded both the season and the opportunities for skiing in the southern parts of the region and serves to further the growing interest in the sport. The index would undoubtedly rise more sharply if skiers not staying overnight and those staying at ski clubs were included. Day skiers are increasing with highway improvements. The highway programs have also stimulated building and ownership of vacation homes in the ski country for year-round "second-home" use.

Prospects for this and future seasons are good. Growing awareness of the income-producing potential of the ski industry and the need for recreational facilities for our growing population is stimulating public and private interests to developing more facilities and better access to them.

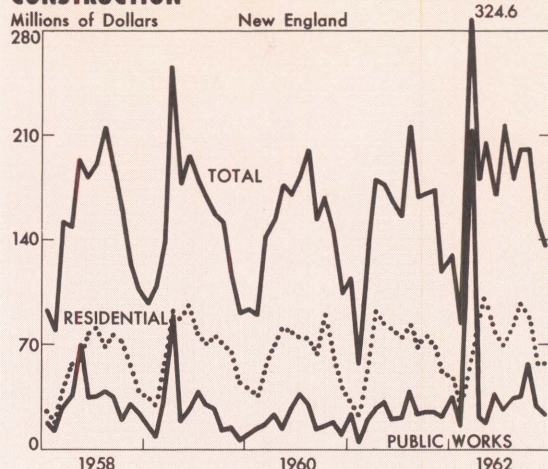
## Ski Lodge occupancy in New England has grown rapidly since 1950.



## MANUFACTURING



## CONSTRUCTION



MANUFACTURING INDEXES (seasonally adjusted)	MASSACHUSETTS (1950-52 = 100)			NEW ENGLAND (1950-52 = 100)			UNITED STATES (1957-59 = 100)		
	Dec. '62	Nov. '62	Dec. '61	Dec. '62	Nov. '62	Dec. '61	Dec. '62	Nov. '62	Dec. '61
All Manufacturing	119	117	122	125	124	125	120	120	116
Primary Metals	102	106	117	110	110	106r	104	102	111
Textiles	43	43	50	64	65	71	n.a.	113	114
Shoes and Leather	115	113	127	125	122	131	n.a.	n.a.	107
Paper	114	108	118	126	125	128	n.a.	121	119

	NEW ENGLAND Percent Change from:			UNITED STATES Percent Change from:		
	Dec. '62	Nov. '62	Dec. '61	Dec. '62	Nov. '62	Dec. '61
<b>BANKING AND CREDIT</b>						
Commercial and Industrial Loans (\$ millions) (Weekly Reporting Member Banks)	1,558	- 2	+ 5	34,957	+ 1	+ 8
Deposits (\$ millions) (Weekly Reporting Member Banks)	4,999	+ 2	+ 3	130,377	+ 3	+ 6
Check Payments (\$ millions) (Selected Cities)	11,296	- 1	+ 9	178,406	+ 4	+ 8
Consumer Installment Credit Outstanding (index, seas. adj. 1957 = 100)	127.8	+ 1	+ 7	140.6	+ 1	+11
<b>TRADE</b>						
Department Store Sales (index, seas. adj. 1957-59 = 100)	116	- 3	0	116e	- 2	+ 3
Department Store Stocks (index, seas. adj. 1957-59 = 100)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>EMPLOYMENT, PRICES, MAN-HOURS &amp; EARNINGS</b>						
Nonagricultural Employment (thousands)	3,842	+ 1	+ 1	56,473	+ 1	+ 2
Insured Unemployment (thousands) (excl. R. R. and temporary programs)	155	+29	+ 9	2,008	+26	0
Consumer Prices (index, 1957-59 = 100)	107.4	0	+ 2	105.8	0	+ 1
(Mass.)	87.7	+ 2	- 2	100.6	+ 1	+ 2
Production-Worker Man-Hours (index, 1950 = 100)	90.80	+ 2	+ 1	98.01	+ 1	+ 2
Weekly Earnings in Manufacturing (\$) (Mass.)						
<b>OTHER INDICATORS</b>						
Construction Contract Awards (\$ thous.) (3-mos. moving averages Oct., Nov., Dec.)						
Total	163,573	-12	+ 6	3,270,340	- 1	+ 9
Residential	66,475	-17	+ 2	1,378,832	- 8	+ 5
Public Works	36,016	-11	+49	673,967	+ 9	+17
Electrical Energy Production (index, seas. adj. 1957-59 = 100)	131	+ 2	+ 7	135	+ 1	+ 6
Business Failures (number)	56	+17	+ 2	1,101	-10	-14
New Business Incorporations (number)	956	+27	-13	13,925	+ 8	- 6
	n.a. = not available			e = estimate		
	r = revised					