

Remarks of Frank E. Morris, President,
Federal Reserve Bank of Boston,
at the Annual Meeting of the Associated
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WHERE ARE WE HEADED IN THE 70's

Soaring 70's
Manufacturing money

The Massachusetts

The future of ~~our~~ economy is of course based on what has gone before. Thus, ^B before we can predict where we are headed in the 70's, we ^{SHOULD} [^] must look at what has taken place in the 60's.

I'm no expert on the NE economy

You must all be well acquainted with the literature of the AIM and its unhappy conclusions about the state of manufacturing in Massachusetts during the 60's. The publications state that Massachusetts now is last among competing industrial states in manufacturing job growth, that manufacturing is not maintaining its share of growth within the state, and that other New England states have surpassed Massachusetts in growth rate.

Despite these recent trends I believe an analysis of some underlying factors shows the condition of the Massachusetts economy to be more favorable than many of you suppose. Essentially, I would like to discuss briefly four positive factors for economic growth in Massachusetts.

First, in manufacturing our product mix has changed considerably over the decade. Overall our manufacturing employment has shown little growth, but since 1961 more than three-quarters of the jobs lost in textiles, apparel, and leather and shoes were offset by the increased number in such industries as nonelectrical machinery, electrical machinery, fabricated metals, and instruments. Massachusetts growth industries are characterized by rapidly changing technology, the requirement of a highly skilled labor force and a product with a high value per unit of weight. Wages in these industries are of course considerably higher than in old line industries and thus are an added

benefit to the state. Durable goods industries now account for 51 percent of the state's manufacturing jobs -- up from 46 percent at the beginning of the decade. Moreover, we estimate that by the end of the seventies these industries will provide a substantially higher proportion of the state's manufacturing employment.

My second point is that in recent years some of our nonmanufacturing industries have become our export leaders. ^{ONE CANNOT DISCUSS THE GROWTH PROSPECTS FOR MASS.} By the term "export" here I ^{IN SPEAKING OF NON-MANUFACTURING EXPORT. I} don't mean just exports to other countries. From the state's point of view, the sale of an item has the same economic impact whether the customer is from New York or Japan. In either case, the sales payment enters the region's income stream, is used to compensate workers here, and is invested in the state's capital stock. ^{Hence I} in this general sense an export is merely a sale to a consumer in another region. A study made by the Federal Reserve Bank of Boston showed that in the 1960's 4 of the 15 leading export industries were in nonmanufacturing. These industries are private colleges and universities, research and development services, private hospitals and life insurance. In contrast, only two of these industries were among the leaders in 1951 and both were in the lower rungs.

By 1962 private colleges and universities had become our third most important export industry. A little more than half their students were out-of-state residents. Moreover, about three-fifths of the total income of these institutions came from out-of-state sources. Education in fact has a higher income generating effect than most other export industries because students who live here during the school year not only pay tuition but also support local retailers, restaurants, banks, airlines, etc.

As in education, the excellence of Massachusetts private hospitals attracts residents of other states and other countries. A few years ago two leading Boston hospitals reported that between 25 and 35 percent of their patients came from outside the state and thus added to the state's income stream.

The rise of management consulting and research firms in the State has also been substantial. A large part of this business has been for the Federal Government but it promises to be a fertile area for the private sector.

Not only have these nonmanufacturing industries become export leaders but indications are that they will continue to grow and new related ones will develop by the seventies. For example, some large firms are now trying to establish a service to provide schools with various types of curriculum complete with textbooks as well as computers, learning machines, slide projectors, etc. Other new educational techniques are being derived from the development of computers, teaching machines, etc.

The shift in the nature of these export industries has changed the needed job skills considerably. Traditionally export jobs have been in labor intensive industries employing predominantly unskilled and semi-skilled workers. The recent trend however has been to labor intensive industries using highly skilled technicians and other well-educated individuals. With greater skill requirements these jobs have yielded higher wages and salaries and thus have added to the state's income.

Even though these industries are in the nonmanufacturing sector, the income they attract from outside the state has the familiar

multiplier effect. The result is that more people are hired, more home manufacturing products are purchased, and more banking, retailing, construction and personal services are needed. In turn these wages add to the income stream and further stimulate demand in an endless though diminishing chain.

Besides providing additions to the flow of income in the state, Massachusetts educational institutions yield additional direct benefits by spinoffs of private science-based firms. The founders of these firms acknowledge that local universities are vital to company formations. These companies also benefit from the services of many local professors who serve on the boards of directors of both science-based firms and area banks. In general there is widespread recognition that the area's graduate schools play a fundamental role in the growth of research and development firms. Moreover, the state is fortunate in having enterprising financiers. A study conducted by the Federal Reserve Bank of Philadelphia a few years ago compared the climate setting up new science-based firms in Boston and Philadelphia. The conclusion was that Boston financiers were scientifically sophisticated and more willing to provide risk capital than their counterparts in Philadelphia.

Thus in the 70's we can continue to look forward to new spinoffs from our great universities and also benefit from the cooperation of our growing financial institutions.

A third positive influence contributing to the state's economic growth is its location within the growth area of the largest megalopolis in the Nation. Already more than a fourth of total U.S. manufacturing employment is located in this area. As the Eastern Seaboard continues to develop, Massachusetts will benefit from its location in the growth

path. The open spaces particularly in the western part of the state will become increasingly attractive both for population and for industrial sites.

Such growth will also be facilitated through the improved interstate highway system which has largely been completed. These improvements make Massachusetts much closer in terms of travel time to all parts of the Eastern megalopolis. Thus, they help offset much of the region's former locational disadvantage of being in the Northeast corner of the Nation.

My fourth and last point is that despite our slow growth in total employment over the past decade, our prosperity has continued and increased. Per capita income in Massachusetts, for example, has risen from 107 percent of the national income in 1948-1952 to 112 percent in 1964-1968. From 1967 to the present, per capita personal income in Massachusetts has actually been growing at a faster rate than in Connecticut.

The rise results largely from two factors: First, unemployment rates have declined sharply since the end of World War II. Second, wage rates in Massachusetts are now closer to the national average than they were earlier. For example, in 1960 average weekly earnings of manufacturing production workers amounted to 91 percent of the national average; by 1968 they had climbed to 93 percent. While these higher wage rates mean higher manufacturing costs, they also indicate a higher level of living for the people of the state -- one of the chief goals of our social policy.

Despite these positive factors, it is true that Massachusetts has problems. Without any single factor being the sole cause of the diffi-

culties, Massachusetts does appear to have a host of small disadvantages which when added together become somewhat more significant. Some of Massachusetts' problems stem from its location. To list a few, industrial fuel must be imported and at the present time, costs of this fuel are the highest in the Nation. Industrial electric power costs are also about 15 percent higher than the national average. The cost of living -- particularly the cost of food -- is higher than in most other regions. For manufacturers - high transportation costs are a serious problem. They suffer significant cost disadvantages in obtaining domestic raw materials and in shipping finished products outside the New England-New York area.

In addition to these locational problems, Massachusetts also has some that are man-made. In a sense, of course, our high industrial fuel costs result from import quotas and thus are also a man-made disadvantage. If these quotas were liberalized, New England could obtain petroleum from Near East and North Africa at a greatly reduced cost. In fact, there is some speculation that the cost of the petroleum fuels in New England would then be the lowest in the Nation. Other man-made disadvantages include somewhat higher than average unemployment compensation costs.

As the AIM literature ~~clearly shows~~, *suggests, some of the slow manufacturing growth in* some slow growth in Massachusetts can be attributed to the business climate. Business taxes are slightly higher here than in other competing states. Of course a study of the impact of state and local tax policy made for the Federal Reserve Bank of Boston suggests that the significant comparison between two locations is their overall state-local tax loads. ~~Furthermore,~~ *✓* Variations within a given state are often greater than among similar communities in

different states. Even when these factors are taken into consideration, however, Massachusetts business seems to have a slight tax handicap.

Moreover, to add to the list, Massachusetts appears on the way to achieving still another man-made disadvantage. I mean in the lack of provision for quality education in the public school system. Traditionally the critical advantage of doing business in Massachusetts has been the character and training of the labor force. Education in our state has been noted for its excellence -- and here I am not referring only to our colleges and universities but also to our elementary, secondary, vocational and technical schools. To maintain quality education, however, we must see that our educational plant and teaching keep abreast with the times and changing technology. This kind of endeavor of course involves spending money. Yet in recent years Massachusetts has done very little in this direction.

For example in 1962-63 Massachusetts ranked fifteenth among the states in estimated current expenditures for public elementary and secondary schools per pupil in average daily attendance. By 1967-68, our state had fallen six places to 21 and was just below the U.S. average. Although our ranking in state expenditures for state institutions of higher education per capita of population has improved slightly over these years from 50th to 47th place, it remains far below what it should be -- and below Alabama, Georgia, and Mississippi. Even in expenditures per student for Federally aided vocational programs, Massachusetts dropped from 2nd place in 1963 to 14th place in 1966.

Our historical pre-eminence in education is the only unique competitive asset we have and only by maintaining this superiority will

Massachusetts continue to grow. For instance, the computer industry -- one of our fastest growing in recent years -- is highly dependent on a skilled and educated workforce. Computer plants are all around us. Minneapolis-Honeywell Co. with more than 10,000 workers in 9 different cities; Wang Laboratories employing 470 workers in Tewksbury, to make electronic calculators or mini-computers; a new company started in 1967, The Viatron Computer Systems Corporation, in Burlington now employs 400. The Digital Equipment Company of Maynard, Mass., one of the fastest growing computer manufacturers now employs 2500 workers, but with the completion of a new plant will undoubtedly expand its workforce. Just this past summer RCA moved from New Jersey into a new \$12 million plant in Marlborough to make peripheral equipment for computers and now employs 1200 workers there. Altogether RCA has 14 separate locations in Massachusetts employing more than 4000 men and women.

If we are to enjoy this kind of growth we must maintain and improve the skills of our labor force and the technical and professional people who manage our specialized industries. I am fearful that we cannot retain our national pre-eminence in high technology industries unless we protect our historic investment in education.