Made In New York: The Future of Manufacturing In New York

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EXECUTIVE SUMMARY

Few trends have been as well documented as the loss of manufacturing jobs in New York City. From its peak in the 1950's, when manufacturing employed about 950,000 people and accounted for one out of every twenty American manufacturing jobs, there has been a steady, seemingly inexorable, decline. To date, over two thirds of those jobs have disappeared. Observing this trend, many of New York's leaders, both public and private, have concluded there is no future for manufacturing in this city, that they need to concentrate their economic development efforts on sectors, such as financial and business services, where New York retains a competitive advantage. Such a conclusion proves to be shortsighted, however. New York City still has approximately 280,000 manufacturing jobs. A closer look at the recent history of manufacturing in New York reveals there are, in fact, two divergent trends at work:

- A continued loss of jobs in industries that produce high-volume, standardized goods where competition is largely on the basis of price; but, at the same time,
- The persistence of firms that make more specialized products, that have close ties to New York-area markets, and that compete primarily on the basis of factors like design quality, customer service, and quick turn-around time.

New York City's loss of manufacturing jobs is strikingly consistent with the experience of most other older central cities nationwide. Cities from New York to Chicago to San Francisco lost on average over half of their manufacturing jobs between 1958 and 1987. Broad technological changes, rather than local policies and practices, were the principal reason for these losses. After World War II, improvements in transportation obviated the need for manufacturers to locate in cities, close to their major markets. In addition, changes in mass production technology increasingly called for large plants laid out on one level, rather than the vertical factory layout characteristic of older cities. These factors made urban manufacturing in New York and elsewhere vulnerable to competition from lower-cost locations in surrounding suburbs, in other regions of the country, and overseas.

Just as technological changes and other economic forces undermined old-style, mass production manufacturing in New York, a new wave of change is opening the door to a more promising era of urban manufacturing. In some industries, economies of scale are diminishing in importance as manufacturing shifts in the direction of smaller, specialized plants that have more limited production runs and are able to move rapidly in and out of market niches. The marketplace dynamics of many products are changing to emphasize rapid response to changes in consumer preferences, and superior customers service. These trends enhance the competitiveness of small firms, especially those that invest in advanced technology to facilitate production. They also make it both possible and desirable for manufacturers to locate once again in cities, where they can be closer to their customers.

One other fast-growing trend in New York is the convergence of the manufacturing and service sectors. Traditional distinctions are blurring, as more service-based firms begin to assemble and customize the materials and equipment needed to deliver their services. The most dramatic example is the new multimedia industry, where production of sophisticated new types of software increasingly resembles the manufacture of "goods."

New York has also benefited from the growth of immigrant-owned manufacturing firms. Often these manufacturing enterprises evolve from retail operations catering to ethnic markets for specialized products, e.g. foods. In some cases, these manufacturers have expanded beyond their original niches and sell their products to broader markets, both nationally and internationally.

Manufacturers' increasing interest in export markets also enhances New York City's competitiveness. With its huge air cargo facilities enabling fast delivery of customized goods, its large international business community, and extensive international trade support services, New York has a ready-made infrastructure that could help specialty manufacturers prosper in world markets.

The interplay of these trends suggests that the future of manufacturing in New York City need not be a continuation of the steady decline of the past four decades. However, unless government works to create a more conducive environment for manufacturing in New York, the rebirth of this sector could be stillborn.

Unfortunately, many New York City manufacturers view government not as a partner, but as an obstacle to their success, and are at risk of moving out of the city, particularly when their businesses begin to outgrow their initial space.

New York City's leaders need to understand the forces that are shaping manufacturing's future here, in order to develop policies that reinforce the city's competitive advantages. Government should reduce the overall cost of doing business, focusing on relief from the commercial rent tax and getting the cost of workers' compensation under control. It needs to develop a coherent vision for land use in New York City that makes it easier for new manufacturers to find space, and to expand when their businesses prosper. Highway improvements to facilitate freight movement, and maintaining mass transit services to manufacturing centers should also be priorities Education and training programs need to be linked to manufacturers, not just service industries. Finally, the city and state should launch a major "Made in New York" promotional campaign, using the city's high profile around the world to promote New York's products.

City manufacturers need to do their part too, to articulate forcefully their common needs and overcome their current invisibility in New York's public discourse. They could do this by creating a New York Manufacturer's Roundtable, along the lines of other well-established industry associations in the city.

New York City cannot afford to indulge in either a romantic or a pessimistic view of its future in manufacturing. New York is not going to regain its position of forty years ago as a major center of mass production operations and jobs in the United States. This does not mean, however, that the sector should be written off. Manufacturing is a remarkably dynamic part of New York City's economy that could have a bright future; it deserves to be better understood and more effectively supported.

INTRODUCTION

Few trends have been as well documented as the loss of manufacturing jobs in New York City. From its peak in the 1950's, when manufacturing employed about 950,000 people, there has been a steady, seemingly inexorable, decline. Today fewer than 280,000 people hold manufacturing jobs in New York, a loss of two-thirds over the past forty years.[1] Observing this trend, many of New York's leaders, both public and private, have concluded there is no future for manufacturing in this city, that they nee to concentrate their economic development policies and efforts in sectors, such as financial and business services, where New York retains a competitive advantage. Such a conclusion proves to be shortsighted, however. A closer look at the recent history of manufacturing in New York reveals a more complex picture. Apart from the massive decline in manufacturing jobs, there has also been a remarkable change in the structure and character of manufacturing activities in New York City that warrants serious attention. There are, in fact, two divergent trends at work:

- A continued loss of jobs in industries that produce high-volume, standardized goods where competition is largely on the basis of price;

But, at the same time,

- The persistence of firms that make more specialized products, that have close ties to New York-area markets, and that compete primarily on the basis of factors like design quality, customer service, and quick turn-around time.

These trends are well illustrated in the Red Hook section of Brooklyn, where an abandoned Revere Sugar refining plant, once a source of 300 jobs, stands empty and decaying. Just hundreds of yards away, however, there is a renovated warehouse complex that is home to a cluster of thriving small manufacturers of housewares, jewelry, glass products and a wide range of other goods. New York City will never recapture the large-scale manufacturing operations that have moved out over the last forty years. On the other hand, the city is proving to be a very fertile spawning ground for new, small

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[1] New York City, Department of City Planning, *Citywide Industry Study; Industry Trends Technical Report*, January 1993, p.26; Port Authority of New York and New Jersey, Strategic Information Group, unpublished data.

manufacturing businesses. An analysis of census data from the 1980's revealed that an astonishing 55% of the small manufacturers in New York City have been started within the previous three years, compared to 38% nationally.[2] Even more impressive is the persistence of these firms: a 1991 survey showed that 96% of responding city manufacturing firms started between 1984 and 1987 were still in business, compared to 78% across the country.[3]

Despite the vibrancy of the specialty firms that characterize New York's manufacturing sector today, they are largely without a voice in the city's public discourse. New York manufacturers lack the kind of citywide organization found in many other U.S. cities and regions, and in other sectors of the local economy as well – the construction industry, owners and developers of commercial real estate, and non-profit hospitals, to cite just a few examples. This lack of an organized voice may help explain why many owners of small manufacturing businesses view state and city government as obstacles to, rather than partners in, their success.

The hemorrhaging of jobs from large plants engaged in high-volume, standardized manufacturing is a phenomenon that has affected central cities across the United States since the mid-50's. This trend is a product of changes in the processes of manufacturing as well as in the nature of the country's transportation network, and it is largely beyond the control of state and local government policies. Public policy can, however, reinforce or undermine those conditions which make New York City a good location for the kind of specialty manufacturing which has persisted, and even thrived here over the last four decades.

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[2] Timothy Bates, "Assessment of the New York City Manufacturing Sector Utilizing U.S. Bureau of the Census Unpublished Data" (New York University, Taub Urban Research Center, October, 1993). The data analyzed was the Characteristics of Business Owners (CB O). The universe from which CBO data is drawn consists of all persons in the U.S. who filed one of three tax forms for 1987: 1040 Schedule C (sole proprietors), 1065 (partners), or 1 120-S (owners of S-corporations). The data includes information collected by the Census Bureau in 1991 from a stratified sample of these tax filers, totaling 127,640 people nationwide. The survey data is supplemented by data that the three types of filers report to the Internal Revenue Service and the Social Security Administration.
[3] *Ibid*

The purpose of the report that follows is to describe the transformation of manufacturing in New York City: what kind of industries left, who the survivors are and why they stay, and the emerging class of new manufacturing entrepreneurs. The report also looks at problems that local manufacturers encounter, and public policies that would support, and even enhance, the city's competitive advantages. Accounting for almost 280,000 jobs, manufacturing remains an important sector in the local economy, particularly as a source of jobs for relatively unskilled laborers and entrepreneurial opportunities for new immigrants. Old-style manufacturing is gone forever in New York, and calls to revive it are wishful thinking. It would be just as misguided, however, to conclude that manufacturing has no future in New York City, and that the sector needs no attention from public or private sector leaders. This report represents an effort to transcend this false dichotomy, replacing it with recommendations for action based on a realistic appreciation of the nature of manufacturing in New York City.

THE TRANSFORMATION OF MANUFACTURING IN NEW YORK

There is a widespread belief that manufacturing in the United States as a whole is in decline, and that the country is converting to a service-based economy. Some analysts, however, argue this is a misconception. They point out that nationally manufacturing has maintained a steady 20%-23% share of Gross Domestic Product since World War II. This is in large part due to productivity growth, because there has been an overall decline in manufacturing employment. The manufacturing sector has averaged 3% annual productivity growth over the last ten years, more than three times the growth for non-farm businesses. Moreover, in recent years, there has also been some renewed growth in manufacturing employment nationally, as well as in the number of manufacturing firms.[4]

Forty Years of Decline

[4] *NE-MW Economic Review*, March 1995, pp. 8-9.

When one compares manufacturing trends in New York City with the national experience, a very different picture emerges. In the early 1960's New York City was not only the leading American city for corporate headquarters, financial services, international trade and travel, and the arts, but also a major manufacturing center. One out of every twenty Americans employed in manufacturing at that time, or over 900,000 people, worked in New York City. The city led the country in production of apparel, jewelry, toys and sporting goods, printing and publishing. It was also a major producer of paper goods and office supplies, machinery, fabricated metal products, and a wide variety of food products destined for local and regional markets. While New York has retained, despite strong competition, its place as a leader for headquarters activity, financial services, the arts, etc., it no longer plays a key role in manufacturing. Today, fewer than one in sixty American manufacturing workers is employed in New York. The manufacturing sector now accounts for under 280,000 city jobs, a drop of over two thirds from its peak, and the number is still falling.[5]

It would be comforting if this decline in employment were largely a result of improved productivity, as has been the case nationally. That is not what has happened in New York. Although the rate of decline in manufacturing output has been lower than that for employment in the sector, it is nevertheless substantial, about 23.5% between 1963 and 1987. If publishing, whose New York city "output" involves very little physical production, is excluded, the decline in output rises to 40%.[6]

The decline in New York City manufacturing has been not only deep, but also broad. A review of employment trends over this same period in twenty different industries, ranging from toymaking to shipbuilding, showed that employment losses in each were at least 60%, with some, like greeting cards and petroleum and coal products, exceeding 90%.[7]

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[5] New York City, Department of City Planning, *op. cit.*
[6] *Ibid.*, pp. 58, A-54.
[7] New York City, Department of City Planning.

New York City's experience, although different from the national record, is strikingly consistent with that in other older central cities nationwide. On average, these older cities have experienced manufacturing job losses between 1958 and 1987 averaging 58%. This similarity in manufacturing decline in cities ranging from New York to Chicago to San Francisco suggests that broader economic forces, not local policies and practices, have been the principal causes of the decline in New York City's manufacturing sector.[8]

Technological changes are the prime reason why cities lost manufacturing jobs. First, improvements in transportation, including the creation of the interstate highway system, new shipping technologies, and the growth of commercial aviation, have obviated the need for manufacturers to locate in cities, close to their major markets. Products can now be transported safely and economically over large distances. Businesses could, therefore, look to other locations that offered cheaper land, energy and labor, without losing any competitive advantages. Secondly, changes in mass production technology called for large plants laid out in one level, rather than the vertical factory layout characteristic of older cities.[9] These factors have made urban manufacturing in Ned York and elsewhere vulnerable to competition from surrounding suburbs; from others lower-cost regions of the country; and from lower-cost locations overseas. Industries involved in the following kinds of activities were especially likely to leave their central cities:

- Manufacture of highly-standardized, relatively low-value goods, such as men's and children's underwear, for which low production costs are the key to competitive success;
- High-volume commodity processing, such as sugar refining; and
- Production of goods for local markets that can be served more cost-effectively from suburban locations.

New York has been particularly hard hit by foreign competition, because of the high concentration of apparel manufacturing in the city. From the 1950's until the present, the apparel industry has accounted

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[8] Curtis Skinner and Frank Branconi, "Manufacturing Design and the Land Use Debate," Citizens Housing and Panning Council, December 1994.
[9] Congress of the United States, Office of Technology Assessment, *The Technological Reshaping of Metropolitan America* (Washington, DC: U.S. Government Printing Office, 1995), pp. 159-160.

for roughly 30% of all manufacturing jobs in New York City. In the early 1960's imports accounted for only 4% of U.S. apparel sales, but by the early 1980's they had risen to 25%.[10] From a high of 300,000 jobs the apparel industry in New York has declined to about 100,000.

The apparel industry's competition comes not only from abroad, however, but also from other regions of the country. In this industry, as well in commodity processing businesses like sugar refining and industrial chemicals, there has been a steady migration south, to states that offer inexpensive sites for large-scale modern plants, and, more importantly, lower-wage, non-union labor.

Likewise, New York City manufacturing has declined relative to its suburbs. In particular, technological changes that enable an industry to serve its markets from a regional, as opposed to a local, base have made decisive the comparative advantages of the suburbs in areas like the cost of labor, energy and land, and access to freight transportation. The commercial baking industry was long a prime example of a local manufacturing industry. Due to the demand for freshness, delivery time had to be minimized; as a result, the industry consisted mostly of dispersed plants serving relatively small, geographically segmented markets. But as new additives made it possible to maintain at least the look and feel of freshness over longer periods of time, companies started to consolidate their operations in lower cost locations where they could realize economies of scale. As a result, where there were once twenty large commercial bakeries operating in New York City, now there are only two. A similar phenomenon occurred in the beer industry.

Who Are the Survivors?

[10] Bruce Herman, John Nelson and Edward Wood, "A New Look at the Apparel Industry," Portfolio, winter 1989 (vol. 2, no. 4), pp. 29-36; Hugh O'Neill, *Creating Opportunity: Reducing Poverty Through Economic Development* (Washington, D. C.: Council of State Planning Agencies, 1985), p. 37.

Despite the overall decline of New York's manufacturing sector, more than a quarter million people are still employed by manufacturing enterprises in the city, more than in the entire state of Connecticut. Who are these firms, and why are they here? The survivors fall into five very broad categories:

Fashion-Related Industries

Although New York has experienced a sharp decline in overall apparel industry employment, it is still the country's leading apparel manufacturing center. This sector is also the largest of New York's manufacturing industries, employing about 100,000 people in 1992.[11] Many of the city's fashion businesses manage all operations, from design to marketing and distribution, from their New York base, but do not do any actual production here. Liz Claiborne is probably the largest firm in this group, but there are many others as well. There are, however, thousands of other firms in New York City engaged in the production of garments. They can be grouped according to two factors: the value of the garments they produce; and the stability of the designs from which they work. Firms in the low-value, standardized design sector – for example, T-shirts – are most vulnerable to competition from lower-cost countries and regions. In fact, very little of this type of production remains in New York.

On the other hand, the city has great strength in the production of high-value goods in areas where fashions change often, placing a premium on a manufacturer's ability to respond quickly to designers' changing demands. While the use of electronic data interchange systems allows manufacturing firms outside New York to stay in close contact with city designers, city-based manufacturers' proximity nevertheless gives them a decided competitive advantage. Women's evening wear and "high-end" men's ties are good examples. Data on sales per employee in small New York City apparel firms confirms the concentration in the city of producers of higher-end products in this industry. While average sales per employee for all small manufacturers in New York are only slightly higher than the regional and national

[11] New York State Department of Labor 1992 employment data.

averages, in apparel firms they are 40% higher than the average for firms elsewhere in the region, and double the average for apparel firms in other parts of the United States.[12]

There are also a number of firms that fall somewhere between these two extremes, like knitwear manufacturers. Although they are subject to ceaseless pressure from lower cost producers, they are able to leverage effectively their proximity to New York's designers and the city's marketing infrastructure.

An emerging trend among retailers that works to New York City's advantage is to make smaller initial orders at the start of each season, with follow-up orders tracking customer demand. Once again, city manufacturers' and contractors' geographic proximity and ability to operate in the "quick response" mode now demanded by retailers provides them an important competitive edge.

Finally, New York's fashion industry benefits from what economists call agglomeration advantages – access to a large pool of skilled personnel, specialized educational institutions like the Fashion Institute of Technology, providers of industry-specific financial and business services, and access to market intelligence and news about the latest technical innovations. Moreover, the concentration of both so many competitors and highly sophisticated customers forces fashion businesses to compete aggressively and keep themselves on the cutting edge.

The fashion industry cluster extends beyond apparel-makers to include jewelry and cosmetics – industries in which high-end production is also closely tied to the design and marketing functions. The cluster also includes firms that make specialized equipment, such as mannequins, needed by the fashion industries. The concentration of these industries in New York reinforces the city's agglomeration advantages.

[12] Bates, *op. cit.*

Other Design-Based Manufacturing Industries

Included in this cluster are producers of textiles, furniture, luggage, electric lighting equipment, and toys and sporting goods. In 1992 roughly 17,000 people were employed in such firms.[13] The companies in this group locate in New York City for much the same reason as fashion-related businesses: they compete in markets in which the quality of design and effective marketing and customer service are the most important sources of competitive advantage. As a result, the city ' s assets in terms of access to design talent, information about market trends, sophisticated customer base, etc. play an equally important role for these industries.

Suppliers to New York's Service Industries

Other manufacturers remain in New York City, despite the high costs and other disadvantages, because their primary customers are concentrated in the city. This group of firms employs about 26,000 people,[14] although its precise size is difficult to measure, given that it is defined by the nature of its customers rather than what it produces. It includes companies ranging from specialty printers serving the financial and advertising industries, to producers of medical instruments and supplies, to makers of a variety of goods used by the city's art industries, including scenery, costumes, audio equipment and picture frames. Businesses in this sector often rely on a combination of physical proximity, quick response and excellent service to maintain a competitive advantage over firms that might be able to offer lower prices. In many cases, their customers are relatively insensitive to variations in price, but are much more focused on the speed and quality of service.

One seemingly contrary development among some manufacturers in this group is their expansion into national, and even international markets. As a result of their work in New York, they have developed

[13] New York State Department of Labor 1992 employment data.
[14] *Ibid*

highly specialized products that can fill a niche in other parts of the world as well. For example, by servicing the city's architectural firms, companies that make sophisticated or customized architectural products may develop a customer base and reputation that brings them customers from outside the region.

Companies Serving Local Markets

There are still a number of manufacturing enterprises, employing around 34,000 people,[15] that remain in New York City because they serve local markets. For the most part, they are part of the local service economy, rather than producers of 'traded' goods. This cluster includes publishers of local newspapers, makers of food products, and suppliers of building products to the local construction industry. Firms in this group are at significant risk of moving outside the city to one of the surrounding, lower-cost suburbs. This is particularly the case with firms that began in New York City by providing specialized goods to local customers – ethnic food products, for example – but have since expanded into regional, national and even international markets. The city is especially vulnerable to losing firms that need to expand physically. As one owner of an expanding food products firms said, "When we see our business at 50% retail and 50% wholesale and mail order, then the economics of staying in New York change. I'm paying New York City rent, New York City labor costs, New York City insurance, New York City taxes and New York City utilities… Unless the city can make it economically feasible for us to stay, it's just a matter of time before we leave."[16]

Residual Firms

There are many firms that remain in New York City even after the original rationale for their being here has been greatly weakened by changes in their industry's structure or in the local economy. Individually, these firms may have go reasons to stay put. One might have significant unamortized investments in its

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[15] *Ibid.*
[16] Interview with Seth Greenberg, owner of William Greenberg Desserts.

New York plant that it is reluctant to write off. Another might not want to risk breaking up an experienced work force. In some cases, the decision to stay may simply reflect the personal preferences of the owner or chief executive. This last reason is cited as the reason why, in the early 1980's, Pfizer, Inc. decided to retain its manufacturing plant in Brooklyn, the only major pharmaceutical facility left in the city.

While individual enterprises in this "residual manufacturing " category might stay on in New York indefinitely, as a group they seem destined to decline. In many cases, their business reasons for staying in New York are too tenuous to survive major internal firm changes, such as retirement of an owner, or purchase by a firm headquartered elsewhere. A good illustration is Farberware, a housewares manufacturer located in the Bronx. It was recently sold to another company that is considering closing down the New York City operations and moving them to a lower-cost location.

Why Do Manufacturers Stay in New York?

This review of the main surviving industry clusters suggests several key reasons why manufacturing activity, despite its precipitous decline in recent decades, is likely to persist in New York City:

Specialized Markets

For some manufacturers, a New York City location offers access to specialized markets that could not be served as effectively from remote locations. These can be as varied as the market for financial printing, and that for kosher desserts. It is not necessary for these firms to serve only New York markets, but if a New York location is to be a competitive advantage, their markets must at least be centered in the city.

Competition Based on Quality and Service

While cost is never an insignificant factor for any business, the manufacturing industry segments most likely to endure in New York are generally those in which the cost of production is not the primary determinant of competitiveness. Instead, firms in these industries compete primarily on the quality of their product design and workmanship, and the strength of their customer service, including quick response time.

Growth of Highly-Productive Specialty Manufacturing

Technological change is undermining the economies of scale that originally drove manufacturers to abandon their urban loft factories for large, horizontal plants in less developed parts of the country. While many plants still produce large batches of standardized products, new technologies have facilitated a "shift of the production system in the direction of a complex of small specialized plants focusing on small batch outputs and able to move rapidly in and out of particular market niches."[17] Productivity is no longer primarily a function of the size of the production run.

Furthermore, computer-based systems used for the design, control and tracking of production processes have often reduced the amount of physical space required for manufacturing operations, making it possible to locate manufacturing within the confines of urban factories and warehouse buildings.

Network Advantages

In some industry segments, a New York location enables firms to reap the advantages that accrue from being part of a network of firms that interact in mutually supportive ways. The successful launch of a new line of neck ties, for example, might require the combined efforts of a fabric designer, a men's wear manufacturer, a tie-maker, and one or more major retailers. Many New York City firms thrive on the mix of competition and cooperation that characterizes the local industry environment. A tie-maker stated, for example, that when his firm receives an order that it is too busy to handle, it often sends the work to one of its leading competitors; that firm does the same. Networks are particularly useful in helping small firms adapt more effectively to rapid changes in their industry environment.

[17] Allen J. Scott and Michael Storper, *Regional Development Reconsidered* (UCLA: Lewis Center for Regional Policy Studies, December 1990), p. 10.

Labor Force Advantages

Manufacturers contacted for this study often cited New York's labor force as one of their reasons for staying in the city. In some cases this reflected the high value these manufacturers place on maintaining their existing skilled workforce intact. Other firms cite the advantage of ready access to a large pool of blue-collar workers. The city's large immigrant labor force in particular seems to be an asset to many firms.

Transportation Advantages

While discussions of the city infrastructure needed to support manufacturing activity usually focus on problems in moving freight, it is clear that New York City's extensive mass transit system is also crucial, because it assures access to a large pool of blue collar workers. Some firms that have moved within New York specifically cited transit access as an important factor in their choice of a new location, and an important reason for staying in New York.

The New Manufacturing Entrepreneurs

New York's future in manufacturing depends not just on the survival of firms that have been here for many years, but also on the city's ability to grow new manufacturing businesses. Is there new industrial activity in the city? If so, what does it bode for the future? An analysis of unpublished Census Bureau data on the Characteristics of Business Owners (CBO), which focuses primarily on small businesses, yields answers to some of these questions. It provides considerable insight into the distinctive features of small manufacturing operations in New York City. Above all, this data suggests surprisingly strong recent growth in new manufacturing enterprises.[18]

[18] All data in this section derived from Bates, *op. cit.*

Overview of Small Manufacturers

The CBO data indicate there were at least 7600 small manufacturing firms in New York City in 1987, and another 7550 in the counties surrounding the city. Compared to small manufacturers nationally and in the suburbs, city firms are unusually concentrated in production of non-durable goods, particularly fashion, and printing and publishing. Apparel firms, for example, represent 14. 8% of the city's small manufacturers, compared to 11.9% in the suburbs, and 5.9% nationally.[19]

Small manufacturers are concentrated in Manhattan (35%) and Queens (42%). Another 20% are found in Brooklyn, and a negligible 3% in the Bronx and Staten Island. Manhattan leads in aggregate sales, but Queens has the largest number of firms. Manhattan's manufacturing strength has traditionally been in non-durables – fashion, printing and publishing and some food processing. Queens has manufacturers of both durable and non-durable products.

The most striking finding in the analysis of the CBO data is the recent high rate of formation of new manufacturing firms in New York City. 55% of small manufacturers in 1987 had been started in the previous three years, compared to only 12% in the eleven surrounding counties, and 38% nationally. Queens had an especially high rate of new firm formation: 69% of small manufacturers in the borough in 1987 were less than three years old. Queens and Manhattan together accounted for two-thirds of young manufacturing firms doing business in the sixteen county New York metropolitan regions.

Characteristics of Start-up Firms and Their Owners

The average number of jobs in young city manufacturing firms was three; their relatively small size may help explain why, in an era of continuing job loss among older, more established manufacturers, the high

[19] While the CBO database includes information on firms in all major SIC groups, the cell sizes for groups in the New York region other than apparel, and printing and publishing, are too small to permit useful comparison. For printing and publishing, New York City tracks the national experience: 17.8% of small city manufacturers are in this sector, compared to 17.5% nationally.

rate of formation of new manufacturing enterprises in New York City has gone largely unnoticed. New York City not only has a higher percentage of young manufacturers, but also a better survival rate for young firms. In 1991, the Census Bureau found that 96% of city firms started between 1984 and 1987 were still in business, compared to 78% outside the New York area. Problems in the way this data was collected probably serve to understate the percentage of firms that failed. Correcting for this, however, is unlikely to affect the finding that the survival rate among New York's young firms was substantially higher than elsewhere.

The combination of a high rate of new-firm formation and a high survival rate suggests that, despite all of the problems associated with operating a small manufacturing business in New York, the city provides fertile ground for new manufacturing enterprises.

There is one additional notable difference between start-up manufacturers in New York City and the rest of the United States: they typically start out with much lower levels of initial capitalization. This may in part reflect the predominance of producers of non-durable goods in the city's mix of manufacturers. On the other hand, this lower initial capitalization might instead reflect greater difficulties in raising capital in New York. It might just as easily be a cause, rather than an effect, of the weak presence in the city of more capital-intensive durable goods manufacturers.

Many of the manufacturers contacted for this study expressed a belief that many commercial banks in New York City are not responsive to the needs of small manufacturing firms. The data provides at least some indirect evidence to support this allegation. For those firms that borrowed money when starting up, the mean equity investment in businesses both in and out of the city was virtually the same. Where the two groups differed was in the source of their debt capital. In New York City, 83% of those starting new manufacturing enterprises borrowed money from family members, while only 29% had loans from financial institutions. In other parts of the country, by contrast, family members supplied the funds for only 28% of the start-up manufacturers, while 59% had loans from institutions.

Finally, the CBO data reveal that the personal characteristics of owners of new manufacturing firms are also markedly different in New York. The "typical" owner of a small manufacturing firm in the city is slightly younger than his or her counterpart in other parts of the U.S. More than a third are women, compared to a quarter outside the New York area. And a far higher percentage of owners are members of minorities or immigrants. The high rate of immigrant ownership is particularly striking, accounting for 40.7% of small manufacturers in the city, compared to only 11.6% outside the New York metropolitan area. The CBO data may actually understate the contribution of foreign-born New Yorkers to the city's manufacturing sector, since many older firms were also, in their time, started by immigrants, often the parents or grandparents of the present owners. Some of these immigrant entrepreneurs start out making products for their own communities, and then expand into broader markets. Some go into industries that have long been open to immigrants – most notably the fashion industry. Still others follow neither of these paths, but instead go wherever their own talents and ambitions, along with the opportunities they perceive, lead them.

ATTIDUTES TOWARDS GOVERNMENT: PARTNER OR OBSTACLE?

The overall decline in New York City's manufacturing sector has been shown to be the result of structural changes largely beyond the control of state and local governments. At the same time, more recent changes in technology and markets mean that the future of manufacturing in New York City need not be a continuation of the recent past. However, unless government undertakes to make the city a more conducive environment for these new manufacturing activities, the rebirth of manufacturing in w New York City will be limited. How well is New York doing in supporting its manufacturers? To help assess this, interviews with a number of city manufacturing entrepreneurs, along with focus group discussions, were organized to supplement the statistical data gathered on New York City manufacturing. Unfortunately, many of these entrepreneurs characterized government as an obstacle to their success. The following were the most commonly expressed concerns:

Policies that Raise the Cost of Doing Business

Complaints about high New York city and state taxes were common. In addition to income and property taxes, manufacturers criticized the city's commercial rent tax. Some manufacturers accept high taxes as the cost of doing business in the city, but complain, sometimes bitterly, about what they perceive as the city's aggressive use of fines and fees as a means to raise revenue. Parking tickets for delivery vehicles, for example, are for some firms so numerous as to be a routine cost of doing business.

Many manufacturers are concerned not just with the direct costs of city inspections and fines, but also with the "hassle factor" of dealing with public agencies they view as unfeeling and unresponsive. One businessman who wanted to challenge a fine reported spending half a day waiting for an agency official who failed to show up for his hearing, only to be told that he could reschedule the hearing or pay a lesser fine. Since he could not afford to lose another day away from his business, he just paid the fine.

Manufacturers also complained about the high cost of workers' compensation. Premiums are significantly higher in New York than in surrounding states and have been rising rapidly. While these are technically insurance premiums rather than taxes, employers view them as the equivalent of a payroll tax – especially since the state administers the program, and in the employers view has failed to control the program's costs.

Another common source of complaints is environmental regulations. They are a source of concern for all manufacturers, but for small manufacturers they can sometimes be prohibitively costly. One baker, for example, feared he would be put out of business if required to install scrubbers to deal with bread-baking emissions – installation would cost over a million dollars, far more than he could afford.

Difficulty of Expanding in New York City

Several manufacturers were particularly outspoken about the difficulty of expanding their city operations. This is a particularly significant issue for New York City, since firms that outgrow their existing space are at high risk of moving out. The problems growing manufacturing businesses encounter include the lengthy, unpredictable permitting and regulatory approval processes of both city and state agencies. Expansion can be even more difficult if it involves property owned by the city – one owner reported negotiating with the city for a parcel adjoining his current plant in the Bronx for over five years, with no end in sight. He was considering closing his city operation entirely, and moving to Yonkers, where he had another plant. Government officials can no doubt cite reasons – many of them good ones – why regulatory approvals or negotiations for acquisition of property can take so long. But these explanations are almost beside the point. Longer lead times for expansion may be more tolerable for firms whose markets and production requirements are more stable and predictable. But those are precisely the type of manufacturers least likely to locate in New York. For many of the firms located here, success depends on their ability to respond quickly to signals from the marketplace. By imposing lengthy, costly and unpredictable delays on market-driven companies that want to expand, New York City effectively weakens one of its greatest competitive advantages.

Accessing Economic Development & Training Programs

New York City and State have a number of programs designed to help firms seeking to locate or expand in the city. There are also programs to assist small companies by helping them use new technologies, or enter overseas markets. Some manufacturers have found these programs quite helpful. One growing producer of Indian food products was able to get a $2 million state loan to help finance a new plant, along with a fifteen-year tax abatement from the city. Others have taken advantage of the good facilities and reasonable rents offered by the Brooklyn Army Terminal, a city-owned industrial complex.

Nevertheless, some firms find the economic development agencies difficult to deal with. They find the process of getting help very slow, burdened with excessive red tape. Manufacturers mention that it is not always easy to know that there are public agencies they can turn to for help. Moreover, in recent years there have been cutbacks in public economic development programs. For example, the Export Trading

Company, sponsored by the Port Authority of view York and New Jersey to help small manufacturers entering overseas markets for the first time, was abolished in the fall of 1995. At the same time, funding for other programs has been cut.

Public Education and Training Programs

While many manufacturing entrepreneurs cite access to a large labor pool or their desire to hold on to a trained work force as one of the most important advantages of a New York City location, many also express concerns about workforce quality. Some mentioned the relatively low skill levels of recent graduates of the city's public schools, as well as their general lack of preparedness for work. Some say is hard to compete with the white-collar businesses in the city for skilled workers and supervisory personnel. Finally, some firms have had positive experiences working with publicly funded worker training programs, but others are doubtful of their value.

State and Local Procurement Policies

Several of the manufacturers who participated in focus group discussions believe state and local government should, when purchasing goods for public agencies, give more support to local businesses. They find existing bidding preferences for local firms inadequate. They are convinced that the overall advantage of retaining jobs in the city outweighs what they regard as minor extra costs when government goes out of its way to buy from local suppliers. To many city manufacturing entrepreneurs, state and cit procurement policies are symptomatic of what they view as a fundamental indifference to manufacturing in New York City. Public officials might well respond that these complaints are exaggerated, or misguided. But once again, this is beside the point. If owners of manufacturing firms see New York City as a hostile, rather than a supportive, environment, they may well leave when the circumstances of their businesses permit them to do so.

OUTLOOK FOR THE FUTURE

As New York City moves into the next century, the two basic trends of the recent past in manufacturing will continue, i.e. industries that mass-produce standardized goods will continue to decline, but more specialized firms will not only survive, but be joined by new competitors. If government adopts supportive policies, New York City will continue to offer advantages as a location for manufacturing enterprises that can benefit from specialized markets and proximity to the city's fashion and design communities, and that can compete primarily on the basis of quality and service.

Public officials and civic leaders concerned with promoting economic development should not get trapped by easy assumptions about exactly which industries have a future in New York City, and which do not. It is important to remember that in today's fast changing economy, the sources of competitive advantage are not static. Changes in production technology, sources of supply, distribution strategies, customer preferences, regulatory policies and many other factors can significantly affect the nature of competition in many industries. The growth of municipal and commercial recycling, for example, has made New York more attractive location for some industries that use recycled materials. The ready availability of recycled materials led in 1995 to Pratt Industries' decision to build a new corrugated cardboard mill on Staten Island – the largest private investment in manufacturing in the city in several decades. Leaders in New York City need to pay close attention to these trends if they are to adopt effective policies. At present, there are three recognizable emerging trends that will be crucial in shaping the future of manufacturing in New York into the next century:

Immigration

During the past fifteen years there has been a steady growth in New York City's immigrant communities. By 1990 immigrants constituted 28.4% of the city's population. By the year 2000 it is expected that 40%

of all New Yorkers will be immigrants and their American-born children.[20] This trend strengthens the prospects for the city's manufacturing sector in at least two ways. First, immigration has been vital to sustaining the supply of blue-collar labor, both skilled and unskilled, on which New York's manufacturers rely. Extensive use of immigrant labor is perhaps the single most commonly shared characteristic of the city's otherwise highly diverse manufacturing sector.

Secondly, immigrant communities create opportunities for local firms to serve emerging specialized markets. This was the case for House of Spice, a firm started by G. L. Soni in 1970 as a retailer of specialty foods to Indian and Pakistani residents of Jackson Heights. The history of House of Spice illustrates a promising path that other immigrant entrepreneurs might follow. As the Indian and Pakistani communities in New York City grew, so did House of Spice, until, in 1989, Mr. Soni opened a manufacturing plant in the Bronx, to produce some of his own products instead of relying exclusively on imports. In 1992 a second plant in Queens followed. By that time, New York City customers accounted for only one third of House of Spice's sales. Another 55% of sales came from other cities around the United States, with the remaining sales coming from exports to the Caribbean and Latin America. In other words, what started out as a small business catering to a local niche market grew to serve a much broader market, not only in the United States, but also abroad.

Growth of Export Trade

House of Spice's increasing export business illustrates what may be a second important emerging trend. Census Bureau CBO data indicate that the city's small manufacturers have only a negligible presence in export markets. Interviews and focus group discussions with many of these entrepreneurs suggest, however, that small manufacturers are beginning to export in increasing numbers, and that many see overseas markets as a source of future growth. Many firms are finding that the factors that make them

[20] New York City, Department of City Planning, *Socioeconomic Profiles: A Portrait of New York City's Community Districts from the 1980 and 1990 Census of Population and Housing*, March 1993, p. 8.

successful in New York City – such as high-quality design and the ability to serve sophisticated customers – can also be the basis for success overseas. Close personal and cultural connections between New York City and countries around the globe also contribute to the success of local exporters. For example, Hertz Computer Corporation, a manufacturer of specialized computer equipment, began targeting the Israeli market in 1990; by 1995 Israel accounted for 25% of the company's sales.

New York manufacturers seem to agree that New York provides a good location from which to serve international markets. In the city it is comparatively easy to find information about foreign markets, the specialized services needed to do business in those markets, and carriers who can ship goods overseas. Expansion of export activity by small manufacturers is starting from a very small base. Nevertheless, it could be a significant source of growth for city manufacturing in the years ahead.

The Convergence of Manufacturing and Services

Traditional distinctions between manufacturing and services are becoming less and less meaningful. Firms that produce a wide range of goods now rely heavily on the provision of related services to give themselves some distinctive advantage in the market place. At the same time, New York City service-based firms are increasingly moving into manufacturing, assembling and customizing the materials and equipment needed to deliver their services. Bloomberg Financial Markets is a notable example. During the past decade it has emerged as one of the world's leading purveyors of financial information, the kind of enterprise that seems to epitomize New York's transition to a 'post-industrial' economy. But Bloomberg also makes specialized desktop computer terminals – "Bloomberg boxes" – through which it delivers on line information to brokers, traders and other financial professionals. The terminals are assembled by Bloomberg employees in the company's own plant, in lower Manhattan.

The convergence of manufacturing and services is taking place most dramatically in New York City's emerging multimedia industry. Government statisticians have traditionally defined the design and production of computer software as a service. Yet increasingly software is also a tangible "good", and its production is more akin to manufacturing. As advances in information technology create new ways to deliver vast quantities of complex information at low cost, creation of the content that the technology will carry becomes more and more important to success in the marketplace. With its strengths in higher education, the arts, entertainment and information services, New York has compelling advantages as a location for the emerging multimedia industry, which combines different forms of information – words, data, pictures and sound – for integrated delivery through a single mechanism.

Music Pen provides an example of the rapid growth taking place in this industry. In 1994 it had only seven employees, including its two founders, who met while students at the Julliard School of Music. Just a year later, Music Pen employed 50 people, and was producing CD-ROM programs for leading media companies.

The multimedia industry already has its own new trade association in New York, with more than 2,000 members, as well specialized academic resources, including the Center for Digital Multimedia and the Interactive Telecommunications Program at New York University. While they may not fit the conventional images of manufacturing, firms that produce goods embodying increasingly complex forms of information are like to be an important part of New York City's manufacturing sector in the years

RECOMMENDATIONS

EFFECTIVE PUBLIC POLICIES

The interplay of forces beyond the control of state and local government are shaping the future of manufacturing in New York City. These include technological changes that give small, specialty manufacturing advantages over large-scale production plants; the heightened role of speed and customer service in manufacturing; and the emergence of service-based manufacturing. These forces are combining to create a positive future for manufacturing in New York City, not just a continuation of the decline of the past four decades. However, unless public policies are formulated that make New York City a more conducive environment for manufacturing activity, this sector's rebirth will be limited. Therefore, the following recommendations are proposed as initial steps to strengthen manufacturing in New York City:

Reducing Business Costs

New York City will never be able to compete as a low-cost location for manufacturing. But there are steps the city and state can take to reduce the city's cost disadvantages at the margin. Doing so would help make the city more attractive as a base from which to serve local and regional markets; and it would also help industry segments that have strong ties to the city, but are nevertheless under strong pressure from low-wage competition, such as the knitwear industry.

New York has some incentive programs that aim to stimulate economic development by making the city more cost-competitive. Chief among these is the Industrial and Commercial Incentive Program (ICIP), under which the city agrees to forego real estate taxes on the value of improvements to commercial and industrial property. However, many of the manufacturers contacted for this study noted that ICIP principally serves companies that make major investments in real estate, not manufacturers. In addition, critics of this and other tax incentive programs challenge their effectiveness, arguing that they unnecessarily and unfairly reward individual businesses for doing things they would have done anyway.

It is ultimately impossible to resolve the question of how much investment is really induced by tax incentives, or whether such incentives are fair. The more important point is that both the city and state would accomplish far more economic development by directly reducing business costs in New York. They could do this, for example, by addressing the problems of rising workers' compensation premiums, costly delays in obtaining permits and other regulatory approvals, and New York City's unique and highly anti-competitive practice of taxing the rent that businesses pay for space.

The Giuliani Administration is, in fact, beginning to address these issues. Despite enormous budgetary pressures, the Administration has made reduction of the commercial rent tax a major priority. To speed up building, a "one-stop permitting" pilot program initiated by the Department of Buildings in 1994 dramatically reduced the time required to obtain needed approvals for small construction projects. The Giuliani Administration has also attempted to reduce the "hassle factor" of doing business in New York, through measures like expanding the range of transactions that can be handled by phone or fax rather than in person, consolidating agency inspections, and eliminating obsolete regulations.

At the state level the Legislature is engaged in a major debate on reforming the state's workers' compensation system. The outcome of this debate is, however, by no means clear.

To make New York City more cost-competitive for manufacturing, the city and state should:

- Reform and reduce the cost of workers' compensation.
- Re-engineer environmental and land use review procedures, to reduce both the direct costs of these processes and the time required to complete them.
- Gradually raise the threshold for exemption from the city's commercial rent tax, with the goal of eliminating the tax for all small manufacturers within the next five years.
- Continue efforts to reduce the "hassle factor " manufacturers experience when dealing with city agencies.

Land Use and Development Policies

Manufacturing firms looking to start up or expand in New York City have not found it easy to find appropriate space. Since the early 1960's the city's land use and development policies have been based on the premise that commercial, residential and manufacturing uses should be clearly separated and that, with over 20,000 acres zoned for the heavier forms of manufacturing, New York has more than enough land to support the needs of this sector. In fact, both elements of this assumption have proved wrong.

The concept of strictly segregating land uses has not been consistent with the way many neighborhoods have actually developed, and in the 1990's it seems increasingly disconnected from the ways in which the city's economy is evolving. By 1993 the City Planning Department recommended relaxing the existing restrictions on some industrial activities – such as printing and baking – in commercial districts. In a major shift in philosophy, the Department, along with local development organizations and civic groups, has begun to view the interweaving of residential, commercial and light industrial uses not as a form of blight, but as a pattern of development that could, in fact, make a positive contribution to the revitalization of some neighborhoods.

As far as land for heavier industrial uses is concerned, the acreage that is practically available in New York is much smaller than the 20,000 acres on the zoning maps would suggest. Some of this land is actively used for other purposes, such as aviation or marine terminals. Some sites are encumbered with obsolete structures, whose demolition greatly increases redevelopment costs; other sites raise issues of liability for hazardous waste contamination and have also been slow to be redeveloped. Several large tracts have intentionally been left vacant, even though they might be among New York's best locations for new industrial development, because the city wants to preserve them for other uses. The South Brooklyn marine terminals are a good example, even though prospects for revival of maritime trade at this site are dim at best.

The false assumption that manufacturing has been adequately provided for has contributed to a series of site-by-site, project-by-project decisions to convert industrial land to other uses, as in the case of the Queens West development in Long Island City. More recently, the City Planning Commission concluded there is no conflict between encouraging the preservation of manufacturing activity and permitting as-of-right development of very large, "big box " retail facilities in manufacturing zones.

In individual instances, decisions to promote non-manufacturing uses may have been smart ones. But these decisions are not informed by a clearly-stated vision for meeting the needs of manufacturing in New York City. As a result, the city's planning and development agencies have never combined land use policy, management of city-owned land, site preparation and infrastructure improvements, and support for modernizing older facilities, into a coordinated strategy. In order to ensure that the city has suitable space for the kinds of manufacturers likely to locate in New York, the city should:

- Formulate a strategic plan for developing modern industrial space that identifies how much land, where, and in what configurations the city should make available.
- Increase the size and expand the range of industrial uses permitted in commercial business zones. Allowable industrial uses should be defined by their performance characteristics.
- Develop consistent zoning and building standards to encourage mixed-use development (residential, commercial and small-scale industrial uses) in selected neighborhoods.

Transportation Infrastructure

Given the types of manufacturers whose competitiveness is enhanced by a New York City location, maintaining the city's pre-eminence as an air cargo center, as well as improving truck access to major industrial areas could help the city retain and even attract new manufacturing enterprises. The New York area's airports lead the nation in the volume of international air cargo they handle; they provide more connections to more parts of the world than anywhere else in the United States. Easy access to these air cargo services can be a real asset to manufacturers of high-value products that sell in national and international markets. However, the city's competitive advantage may be eroding under fierce pressure from integrated carriers like UPS and Federal Express that are making it increasingly easier for their customers to ship products overseas from anywhere in the United States. To cope with this competition, New York needs to improve its air cargo facilities, along with truck access to them. This latter goal could be partially achieved by allowing small trucks to use Queens parkways now closed to truck traffic.

Truck access is by far the most important transportation issue for New York's manufacturers. The city's highways are severely congested, badly outmoded, and in some places badly deteriorated. A 1993 study by the City Planning Department correctly pointed out that no single action can correct this situation, but that a series of relatively inexpensive incremental improvements, such as improved signage and signaling, or designating new truck lanes, could have a significant impact.[21] More substantial improvements, such as

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[21] New York City, Department of City Planning, *Citywide Industry Study, Transportation Technical Report*, January 1993, p.v.

construction of a new Bruckner-Sheridan interchange in the Bronx and new on- and off-ramps on the Gowanus Expressway, should also be high priorities. Major long-term projects are more difficult to implement in this era of budgetary constraints, but planning and related work on them should continue. Projects in this category include the reconstruction of Route 9A on the West Side of Manhattan, adding a fourth lane to the Staten Island Expressway, and building a twin span to the Goethals Bridge between Staten Island and New Jersey.

Some advocates argue that instead of improving the infrastructure for trucks in New York City, there should be costly new investments in the rail freight infrastructure. They envision this as the key to stimulating a rebirth of manufacturing. Their arguments are based more on wishful thinking than on hard analysis. The types of manufacturing enterprises that are major users of rail service are those that produce standardized products in large quantities, and compete primarily on price. Better rail freight service is unlikely to make them locate in New York City, because transportation is only one of several cost factors that make the city noncompetitive for these types of manufacturers. There may be other compelling reasons for improvin4 the city's existing rail freight infrastructure, such as maintaining Hunts Point's competitiveness as a food distribution center, or facilitating export of the city's garbage to remote landfills. But under any reasonably foreseeable circumstances, rail freight will remain a relatively minor part of the city's manufacturing infrastructure. The important point is that infrastructure investment policies should be driven by what New York's industries will need in the next century, rather than by an urge to solve the problems of the past.

Transportation issues encompass not only movement of freight, but also movement of the workforce. Preserving New York's competitive advantage in providing access to a large and diverse labor-pool requires recognizing the contribution that mass transit makes to the vitality of several of New York's industrial areas. In an era when the Metropolitan Transportation Authority is being forced to cut back on service and postpone needed capital improvements, maintaining bus and subway service to industrial sites should be a priority.

Maintaining and improving the transportation infrastructure that supports New York manufacturing requires the combined efforts of the city, the state, the Port Authority and the MTA. These agencies should:

- Continue to develop new air cargo services and facilities, and to improve security at Kennedy Airport
- Improve freight movement by truck in and around the city through a combination of incremental improvements in the short term; completion of key intermediate-size capital projects during the next five to ten years; and continued planning for longer-range major capital projects.
- Pursue opportunities for low-cost improvements in rail service in selected areas, such as Staten Island's North Shore and the Harlem River Yard in the South Bronx.
- Ensure continued mass transit service to the city's major manufacturing areas.

Increasing Productivity

Increasing productivity is one way New York City firms can cope with their competition from lower-cost areas. But small manufacturers, on the whole, tend to be slower to adopt new technologies and production management techniques.[22] Limits on owners' time, energy and financial resources make it difficult for small firms to employ consulting engineers or invest in new technologies. Fortunately, New York City has a number of organizations that help small manufacturers improve their productivity. Most significant among them is the Industrial Technology Assistance Corporation (ITAC), which is supported by the state and federal governments. Without exception, manufacturers that participated in this study who had worked with ITAC were enthusiastic about its usefulness.

To help local manufacturers compete through productivity improvements, the city and state should:

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[22] Brian Bosworth, "State Strategies for Manufacturing Modernization, " in Evelyn Ganzglass, ed. , *Excellence at Work: Policy Option Papers for the National Governors' Association* (Kalamazoo, Michigan: W.E. Upjohn Institute, 1992), pp. 24-32; Benn et Harrison, Leata and Mean: *The Changing Landscape of Corporate Power in the Age of Flexibility* (New York: Basic Books, 1994), pp. 53-74.

- Fund an expansion of the services provided by ITAC and similar organizations that work with small manufacturers to improve their productivity.

The Manufacturing Workforce

Manufacturers who participated in this study frequently cited the availability of a large pool of workers with a wide range of skills as one of New York City's great competitive advantages. But many also expressed concerns about their difficulty in finding workers with specialized skills, and in competing with service firms for people with general business skills, such as accountants.

Most of New York City's secondary and post-secondary schools do not have a strong relationship with the city's manufacturing community. There are a couple of exceptions, and in the case of the Fashion Institute of Technology, New York has the country's leading school serving fashion-related industries. But other types of manufacturers in the city generally do not have ties to schools that could serve as a pipeline for future workers. Likewise, few publicly-funded job training programs have a focus on manufacturing, with some notable exceptions, such as the sewers' training sponsored by the Garment Industry Development Corporation.

These weak links between New York's educational system and the manufacturing sector make it more difficult for young New Yorkers – especially those who by interest or aptitude are not inclined to office work – to get access to jobs and training opportunities in manufacturing. There has been a growing awareness, both in the cit and nationally, of the importance of providing a more structured transition from high school to work for those students not planning to go to college. In the past year New York City has started a program as part of the Clinton Administration's school-to-work initiative. Small to mid-sized manufacturing firms could be exceptionally valuable partners in this or similar programs, participating in formal apprenticeships or 'tech prep' programs that combine the last two years of high school, on-the-job training, and two years of community college work in a single coherent course of study.

Despite the city schools' weakness in preparing students for jobs in manufacturing, it should be emphasized that most manufacturers have little trouble filling entry-level, blue-collar jobs with people who are eager to work and ready to learn. Many of these people are new immigrants. Immigrant workers – and entrepreneurs – are absolutely essential to the survival and future growth of manufacturing in New York City. Current efforts in Washington to reduce significantly the number of legal immigrants permitted to enter the United States pose a serious threat to manufacturing in New York – indeed, to the entire city economy.

To ensure that New York's manufacturers continue to have access to an adequate supply of workers at all skill levels, and that young New Yorkers can get access to jo1 and training opportunities in the manufacturing sector, the state and city should:

- Expand the role of manufacturers' organizations, like the Garment Industry Development Corporation, as sponsors or providers of publicly-funded job training.
- Target small to mid-sized manufacturers as key participants in school-to-work
- Oppose efforts to reduce the number of legal immigrants allowed to enter the U.S, each year.

Access to Capital

Newer small manufacturing entrepreneurs in New York City tend to start up business with lower levels of capital borrowed from banks than their counterparts in other parts of the country. While this finding does not, by itself, prove that New York banks are more cautious about lending to new manufacturing ventures, it nevertheless highlights a problem deserving of attention. Several studies have found that the ability to obtain bank financing is one of the key determinants of the survival and growth of small businesses.

State and city government can play only a limited role here. Experience with loan programs directly administered by public agencies, in New York and elsewhere, suggests they are rarely effective in addressing the financing needs of small businesses. There may, however, be indirect ways in which government can help

The Giuliani Administration's work with a coalition of local banks to develop a multi bank community development coloration might lead to ways to extend credit to companies that cannot quite meet individual banks' lending criteria. The provision of technical and professional assistance aimed at helping prospective borrowers become "loan-ready " can be just as important. For many young companies, difficulty in getting bank financing may be more an issue of loan readiness than the underlying strength of their business – they may, for example, lack a formal business plan, or have outstanding but resolvable credit issues. There are a number of organizations in New York City that provide such assistance. There are also two federal Small Business Administration "one-stop capital shops" that might prove to be an additional resource in helping small companies qualify for loans.

To improve small manufacturers' access to capital, the city should:

- Continue working with local banks to establish a multi-bank community development corporation, and target local manufacturing companies as one of the segments to be served.
- Support technical assistance programs that have proven to be effective in helping small manufacturers qualify for loans.

Market Development

Many of New York City's manufacturers make highly specialized products catering to niche markets. In some instances, public institutions can be numbered among the potential customers for these products. However, government procurement procedures (and this is especially true in New York City) are often deliberately designed not to be flexible. Fearing even the appearance of political favoritism in purchasing decisions, government agencies seek to force as many purchasing decisions as possible into the straitjacket of standardized specifications and competition solely around price. Such procedures are ill-suited for the purchase of products for which the quality of design and customer service, rather than price, are the most significant variables. Moreover, they fail to recognize the role that state and local government procurement can play in building a market for the products of small local companies. More flexible procedures could help public agencies make more cost-effective decisions about the purchase of non-commodity products, even while allowing more effective use of public purchasing as a local economic development resource. This would be consistent with the best procurement practices of the private sector, where many companies have moved away from arms-length (or even adversarial) relationships with suppliers and have begun to treat them as partners. Today many purchasers and suppliers share information and technology, working together to solve design, production, logistical and marketing problems.[23]

Government can also help small manufacturers looking to foreign markets as new sources of growth. Unfortunately, this is an area where public funding has been cut back. The Port Authority's Export Trading Company, which directly marketed products of area manufacturers overseas, was abolished in the fall of 1995, despite its popularity with the companies it served. State Department of Economic Development funding for export assistance and promotion programs has also been cut significantly.

Above all, neither the city nor state is willing to underwrite a marketing campaign to promote products "Made in New York". New York City has a high profile around the world that could be used to create a brand identity for New York products. This is precisely what the state did so successfully for the tourism industry with its "I Love New York" campaign, which began in the late 1970's. In the early 80's, the state sought to extend the concept into manufacturing with a "Made in New York" campaign. Unfortunately, it became embroiled in charges that it was being manipulated for political purposes during the 1982 gubernatorial campaign, and it was terminated in 1983. The city and state should revive the "Made in New York" campaign concept, using it not only to promote the city's products, but also to rebuild public

[23] Rosabeth Moss Kanter, *When Giants Learn to Dance: Mastering the Challenges of Strategy, Management and Careers in the 1990's* (New York: Simon & Schuster, 1989), pp. 128-140

awareness locally of the continuing importance of manufacturing to the economic life of the city. Such a campaign could include seasonal exhibits of locally produced goods by major retailers, and in locations such as Grand Central Station or Rockefeller Center, as well as mayoral awards for innovation in manufacturing, industrial design, effectiveness in exporting, etc.

To help New York's manufacturers market their products more effectively, the state and the city should:

- Reform procurement policies to give state and city agencies greater flexibility, especially in purchasing specialized products.
- Treat local suppliers as long-term partners, as the best-managed private companies do, rather than dealing with them on a transaction-by-transaction, arms-length basis.
- Restore and expand successful programs to help small manufacturers market their products overseas.
- Initiate a "Made in New York" campaign, aimed at building on New York's "brand identity", and at raising the visibility of New York's manufacturing sector.

Manufacturers Need a Stronger Voice

While it is clear that state and city government could do more to support the continued development of manufacturing in New York City, it is also incumbent upon the city's manufacturers to do more on their own to advance their common interests. New York's manufacturers lack the kind of citywide organization found in many other U.S. cities and regions, and among other sectors of the city's economy – the construction industry, owners and developers of commercial real estate, and non-profit hospitals, for example. City manufacturers should, therefore, create a New York Manufacturers' Roundtable that could:

- Raise public awareness of the role that manufacturing plays in the life of the city.
- Provide a forum for discussion of issues affecting the manufacturing sector.
- Provide a framework for joint efforts to address common problems.

CONCLUSION

Contrary to popular belief, manufacturing in New York is not doomed to extinction. Although industries engaged in mass production of standardized products will continue to decline, other kinds of manufacturing can survive, and even thrive, in New York City. Manufacturing is undergoing profound changes, particularly in the convergence of manufacturing and service in high-tech information industries. New York City's leaders need to understand the forces that are shaping manufacturing's future here, in order to develop policies that reinforce the city's existing competitive advantages. The city cannot afford to indulge in either a romantic or a pessimistic view of manufacturing in New York. New York is not going to regain its position of forty years ago as a major center of manufacturing employment and activity in the United States, regardless of local policies or investments. This does not mean, however, that the sector should be written off. Manufacturing is still a large, and remarkably dynamic, part of New York City's economy, and it deserves to be better understood and more effectively supported.