Can Services Sustain a Regional Economy?

By John M. L. Gruenstein and Sally Guerra*

Over the last hundred years, the United States has seen more and more employment shift from manufacturing to service industries. Today well over half the nation's workers are employed in service industries, and the percentage still is rising. This trend has gone farthest in metropolitan areas, and some policymakers are concerned that the shift toward services may not be the healthiest direction for cities and their suburbs over time.

Such concern reflects a long-standing view about how cities grow and prosper. Cities are assumed to grow by exporting manufactured goods to outside customers who provide a steady inflow of revenue in return, and services are regarded as a spin-off from this manufacturing export activity. On this view, the income that city residents earn from export goods is spent in service establishments of all kinds, ranging from barber shops to restaurants, until it eventually leaks out through purchases of imports. Thus the total size of the service sector is limited by the volume of manufacturing exports. When service employment reaches a certain multiple of manufacturing employment, one local service firm can grow only at the expense of another.

This view—the export-base theory—is appealing because it focuses correctly on the importance of exports for urban prosperity.

*John M. L. Gruenstein, Research Officer and Economist in charge of urban and regional studies at the Philadelphia Fed, received his Ph.D. from the University of Pennsylvania. Sally Guerra, a Research Assistant, joined the department in 1979.

But it overlooks the fact that services can be exported as well as goods and independently of goods—an important fact for economic development planning. This view also overlooks the importance of revenue flows such as Federal transfer payments which have helped fuel part of the growth of local services. To the extent that export demand can grow and perhaps even take the place of some loss of transfers, going with the flow by shifting economic development efforts toward promotion of services could be more cost-effective than trying to stem the loss of manufacturing.

THE SURGING SERVICES

Like most other advanced countries, the United States has been increasing its service-sector share of total national employment for several decades while the goods-producing share—agriculture, extraction, construction, and manufacturing—has been falling.

Most of this shift in employment can be attributed to differences in labor productivity. Victor Fuchs has calculated that, from 1948 to 1978, employment in the services-producing sector grew at an average annual rate of over two percent, while employment in industry (here defined to include transportation, communications, and public utilities along with manufacturing, construction, and mining) was growing at less than one percent a year and employment in agriculture was declining by more than two percent a year. Because the sectors differ much less in terms of growth in the value of their products than in numbers employed, Fuchs concludes that about 75 percent of the difference in employment growth stemmed from substantially higher labor productivity growth rates in agriculture and industry than in services.[1]

National demographic and income trends also have stimulated growth in demand for services. The increase in the percentage of women working and the decrease in the percentage of families with children probably are raising the value of services demanded. Services that used to be provided by family members, such as food preparation and child care, increasingly are purchased outside the home. The increase in the over-65 share of the population also may have increased the demand for services, especially health services. It's probably true also (but less certain) that as per capita income grows the demand for service output grows at a somewhat faster rate than the demand for manufacturing output, so that the ratio of service employment to manufacturing employment tends to rise even further.

The shift to services is far more advanced in metropolitan areas than in rural areas. In 1970 over 66 percent of the jobs in metropolitan areas could be found in the service sector, compared to just about 56 percent of nonmetropolitan employment (see METROPOLITAN AREAS SPECIALIZE IN SERVICES). Between 1970 and 1977, employment in both sectors grew faster in nonmetropolitan areas than in others, but the differential between metropolitan and nonmetropolitan growth for goods production was much higher than for services production. By the end of the period, over 70 percent of metropolitan jobs were in services compared to 60 percent of rural jobs.[2]

The strong service orientation of urban areas can be seen most vividly by looking at central cities located in the cores of metropolitan areas. In a report for the U.S. Department of Housing and Urban Development, Seymour Sachs examined growth in four

[1] Victor R. Fuchs, "Economic Growth and the Rise of Service Employment," National Bureau of Economic Research, Working Paper No. 486, June 1980.

[2] U.S. Bureau of the Census, *Social and Economic Characteristics of the Metropolitan and Nonmetropolitan Population: 1977 and 1970*, Current Population Reports, Special Studies P-23, No. 75, U.S. Government Printing Office, Washington, D.C., November 1978.

METROPOLITAN AREAS SPECIALIZE IN SERVICES

	METROPOLITAN			NONMETROPOLITAN		
	Percent of Employment		Average Employment Growth Rate (percent per year)	Percent of Employment		Average Employment Growth Rate (percent per year)
	1970	1977		1970	1977	
Goods	33.5	29.4	0.02	44.1	40.6	2.13
Services	66.5	70.6	3.18	55.9	59.4	4.90
	100.0	100.0		100.0	100.0	

SOURCE: U.S. Bureau of the Census, *Social and Economic Characteristics of the Metropolitan and Non-Metropolitan Population: 1977 and 1970*. Current Population Reports, Special Studies P-23, No. 75, U.S. Government Printing Office, Washington, D.C., November 1978.

sectors—manufacturing, retail trade, wholesale trade, and selected services (a defined subset of services)—for 14 growing and 14 declining cities over the period 1967-72.[3] In the growing cities, the trade and selected service sectors accounted for 83 percent of the growth. In the declining cities, manufacturing accounted for almost 80 percent of the net loss.

What is most striking about the declining cities is that although employment in retail and wholesale trade also declined, the selected service sector actually increased significantly, offsetting about 12 percent of the loss in the other sectors. And this rise did not count health and educational services, which are not included in selected services but which also grew substantially over the period. These widespread urban trends are exemplified quite clearly in the case of Philadelphia.

SERVICE GROWTH IN PHILADELPHIA

Between 1970 and 1980, according to the

[3]U.S. Department of Housing and Urban Development, Office of Policy Development and Research, "Changing Conditions in Large Metropolitan Areas," Urban Data Report No. 1 [data provided by Seymour Sachs], Washington, D.C., 1980 as reported in U.S. Department of Housing and Urban Development, *1980 President's National Urban Policy Report*, HUD-583-1-CPD, August 1980, Table 3-3. The selected services covered by the Census of *Selected Services*—the ultimate source of the data—include hotels, personal services, business services, automotive and other repair services, amusement and recreation services, dental laboratories, legal services, architectural, engineering, and surveying services; they exclude health, education, social services, and some other miscellaneous service industries.

U.S. Bureau of Labor Statistics, the nation at large saw increases in both manufacturing and service employment, of 5.1 percent and 36.5 percent respectively. In Philadelphia, by contrast, manufacturing employment fell by 19.9 percent while nonmanufacturing jobs increased by 18.2 percent.[4]

[4]U.S. Bureau of Labor Statistics, *Philadelphia Employment Trends, 1980,* June 1981. Totals for nonmanufacturing are taken from earlier BLS reports.

A breakdown of employment change by sector for the SMSA and the nation can give some clues to the factors that might be responsible for the shift out of manufacturing (see SERVICES GAIN, MANUFACTURING LOSES IN PHILADELPHIA).

The numbers show that even though most kinds of services registered strong growth in the region, the growth rate at the national level was higher in every case. Growth was fairly close to the national level, however, in

SERVICES GAIN, MANUFACTURING LOSES IN PHILADELPHIA

Employment Change: Philadelphia SMSA and the United States, 1970-1980

	Percentage Change 1970-1980* SMSA	Percentage Change 1970-1980* U.S.	Index of Relative Performance SMSA vs. U.S.†	Population-Adjusted Index SMSA vs. U.S.‡
Total Employment	6.6	27.9	.83	.94
Private Sector	5.5	27.7	.83	.94
Contract Construction	-8.1	24.6	.74	.84
Manufacturing	-19.9	5.1	.76	.86
Transportation and Public Utilities	-6.6	14.2	.82	.93
Wholesale and Retail Trade	-13.5	36.8	.63	.72
Finance, Insurance, and Real Estate	22.8	41.6	.87	.99
Services and Mining	41.3	54.2	.92	1.05
Government	12.9	28.8	.88	1.00
Federal	-14.7	4.9	.81	.92
State and Local	26.7	35.4	.94	1.07
Total Population	-2.2	11.5	.88	—

*The 1970 data are not strictly comparable to 1980 date in some industries because of redefinition. These distortions should be small in most cases.

†Philadelphia SMSA share of U.S. employment in 1980 divided by Philadelphia SMSA share of U.S. employment in 1970.

‡Index of Relative Performance for employment category divided by corresponding index for population.

SOURCE: U.S. Bureau of Labor Statistics, *Philadelphia Employment Trends, 1980,* Regional Report 140, 1981, Table 4.

two sectors (Services and Mining, and State and Local Government), and relative to population the region outperformed the U.S. in employment growth in these sectors.

The fastest growing subsector of employment in services, both for the SMSA and nationally, was legal services (see LEGAL SERVICES SHOW LARGEST GROWTH). For the country as a whole a number of reasons can be advanced for the rise, including increased litigation (partly occasioned by the increased number and complexity of government regulations), procedural reforms which increased the number of hearings and the length of time before trial for many defendants, and the funding of community legal service organizations by the Federal government. In addition, the 1970s likely saw a larger than usual percentage of students decide to pursue careers in the law as a way of furthering social reform. Philadelphia's large increase in legal services employment probably was, by and large, participation in this national trend.

Business services employment rose by almost as large a percentage as legal services, and here the increase was large both in the number of jobs—about 33,000—and in comparison to the nation overall. Providing business services is a traditional role of urban areas, and improved communications

LEGAL SERVICES SHOW LARGEST GROWTH

Services Growth: Philadelphia SMSA and the United States, 1970-1978

	Percentage Change 1970-1978*		Index of Relative Performance	Population-Adjusted Index
	SMSA	U.S.	SMSA vs. U.S.	SMSA vs. U.S.
Hotels, Lodging	7.5	26.7	.85	.94
Personal Services	-17.8	-5.5	.87	.97
Business Services	69.8	59.3	1.07	1.19
Health Services	58.9	63.1	.97	1.08
Hospitals	45.4	39.9	1.04	1.16
Legal Services	70.3	84.2	.92	1.02
Educational Services	39.2	29.6	1.07	1.19
Colleges & Universities	67.2	49.2	1.12	1.24

*The 1970 data are not strictly comparable to 1978 data for some industries because of redefinition. These distortions should be small in most cases. Services listed belong to the Services and Mining sector shown in SERVICES GAIN, MANUFACTURING LOSES . . . , but data shown here are not strictly comparable to data shown there because of differences in collection methods.

SOURCE: U.S. Bureau of the Census, *County Business Patterns*, 1970 and 1978.

and transportation enhanced the growth of the public relations, direct mail, management consulting, testing, data processing, and other firms that make up this subsector. It is possible also that changes in organizational structure for firms in the area, which led to purchases of services from outside firms rather than in-house provision, could have caused some growth in this field.

Educational services, especially those provided by colleges and universities, were other big gainers. They grew appreciably faster in Philadelphia than in the nation at large. At the national level an increased demand for higher education was caused by the maturing of the postwar baby boom—a trend which has run its course. Probably the most important factor influencing the local rise was the presence of many established institutions of higher learning in the SMSA, especially in the city. The percentage rise for educational services employment was even higher for the city than for the SMSA (see Appendix).

Health services employment also increased substantially. Although the raw percentage rise was smaller than nationally, when adjusted for Philadelphia's population decline the percentage change was greater. The growth of in-kind income for health services, both from private health plans and public sources, principally Medicare and Medicaid, strongly stimulated medical services employment nationally over the period, and the Philadelphia area may have gained more than proportionally from these sources. The SMSA also had a larger percentage increase in the over-55 population than did the nation—another likely factor in stimulating a greater demand for medical services in the area.

In short, Philadelphia showed considerable strength in services even as its manufacturing employment was ebbing away. These facts are not compatible with the manufacturing version of the export-base theory, but they can be accommodated by a restructured version.

RETOOLING THE EXPORT THEORY

The export-base theory was developed to deal with manufacturing economies. But it can be applied to service-oriented economies if external sources of demand for services can be identified and if associated revenue flows can be detected.

The Shape of the Theory. The main premiss of the export-base theory is that the growth of cities is determined by what they sell elsewhere. Thus the theory divides the economy of a city into two sectors—export and local. Firms in the export sector sell their wares mainly to customers outside the city, both in the immediately surrounding area and in other cities. Detroit's automobile industry and Pittsburgh's steel plants are prime examples of export sectors. The local sector, however, produces mostly for city customers. Places like beauty salons, auto repair shops, and pizza parlors belong to the local sector.

The smaller the city, on this theory, the more important the export sector is likely to be, because export earnings are used to pay for imports. Since smaller places are less self-sufficient—that is, since their residents must buy more kinds of goods and services from elsewhere—their imports are relatively large. So, in general, their exports must be larger, too. But whether large or small, all cities clearly must export something of value to pay for agricultural supplies and other goods and services produced outside their boundaries.

In the export-base theory, city growth is fueled by the rest of the world's demands for the city's products. "Trenton makes, the world takes," as the sign by the railroad says. Growth in exports feeds back into the city's economy, multiplying the initial effect on the exporting industry.

Suppose Detroit's car sales rise. Then workers and others who receive income from auto plants will have more to spend, and much of it will get spent and respent in the local economy. Retail stores, restaurants, and other local service providers will find their incomes rising, and they, too, will increase their purchases. Another source of this multiplier effect is purchases of parts and business services from other companies by the auto plants themselves as business expands. Since some of these purchases will be for imports, the process doesn't continue forever. Gradually, the extra dollars brought in by increased export earnings leak out of the local economy into imports, but not before the initial increase has been multiplied. Together these induced effects (through higher incomes) and indirect effects (higher local business purchases) will result in the respending of export dollars again and again in the local economy before they are siphoned away.

The dark side of the theory is the effect of a decline in the demand for exports. Here, too, the effect is multiplied, but now in a downward direction. As auto workers lose overtime and get laid off, and as auto plants stop buying from their suppliers, the initial loss of income is multiplied, drastically worsening the economic situation.

In this form, the theory is simple, elegant, and persuasive, but it focuses on economies that are based on manufacturing rather than on services. And in urban areas, the service sector has been growing even as local employment in manufacturing has been falling off. This growth in the urban service sector can be explained only in part by trends in national productivity, demography, and income. A retooled export-base theory is needed to explain the remainder.[5]

Exportation of Services. One reason manufacturing often is identified as the export sector and nonmanufacturing as the local sector of an urban economy is that where a product is consumed is confused with where the money comes from to pay for it. Unlike most exported manufactured goods, which are bought and consumed outside the producing city, many exported services are consumed within the city of origin. Tourist services offer a prime example. Although these services may be consumed in Philadelphia or Atlantic City hotel rooms and restaurants, they are as much export items as Detroit's autos. The key thing is that the money comes from outside.

Another reason for thinking of the export sector as manufacturing is that doing so used to get much closer to the truth. A hundred years ago, transportation technology was oriented more toward moving freight than toward moving people, and communications technology could handle far less information than it can now. As transportation and communications have developed, the possibility of exporting services of all types has increased tremendously.

The growing importance of service exportation from metropolitan areas has been investigated by Richard V. Knight of Cleveland State University. From 1940 to 1960,

[5]If productivity, demographic, and income trends had moved farther toward services in metropolitan areas than in nonmetropolitan areas, they might help explain the greater urban specialization in services. In general this does not seem to be the case. Although the level of manufacturing productivity is higher in metropolitan areas, nonmetropolitan areas have been experiencing faster rates of manufacturing productivity growth, especially over the 1970s. This would tend to work against the strong relative performance of metropolitan areas in the services over that period. Higher inflation-adjusted median family incomes in metropolitan areas could help explain higher levels of service employment there, but again the trend during the 1970s was in the wrong direction to explain relative services growth: real family incomes fell in metropolitan areas between 1970 and 1977, especially in central cities, while growing in nonmetropolitan areas. Differences in demographic trends also offer little help as an explanation. The percent of the population over 65 and the percent of families without children both were lower in metropolitan than in nonmetropolitan areas during the 1970s. It is true that both categories increased substantially in metropolitan areas, which certainly increased services employment. But these increases relative to the population basically paralleled national trends, and thus they do not provide an explanation for the urban orientation of services growth.

according to his estimates, the services (including trade) increased their share of total metropolitan employment in export activities from 36 percent to 44 percent. The largest components of these export services were business-oriented services such as finance and transportation, which rely on large transfers of information and frequent face-to-face contacts. Most of the trade in services was estimated to occur among metropolitan areas: in 1960 about one-third of metropolitan service requirements were estimated to be imported, and most of that third came from other SMSAs.[6]

A related source of growth in services is import substitution. If service producers in one area start providing services that residents had been importing from other areas, then the local service sector will grow. In general, import substitution is associated with growing areas. As population thresholds are reached, it becomes economical to provide all kinds of specialized services, ranging from those of full-service hospitals to those of gourmet restaurants, that residents used to get elsewhere. Since the population of nonmetropolitan areas has been growing faster than that of metropolitan areas, import substitution probably has shifted some service employment growth away from the cities. But certain service sectors in certain metropolitan areas probably have grown through this mechanism.

The Effect of Transfers. Another source of growth for urban service employment is demand fueled by transfer payments and related income flows into the local economy. The local sector can grow faster than the national economy, even in the absence of export growth and import substitution, if demand is being generated by net transfers of income to local residents. A retirement community, for example, could have virtually no exports but still have a thriving local service sector financed by private and government pension payments, dividends, social security, and transfer income flowing to local residents from elsewhere. Metropolitan areas, and particularly older central cities that have been net recipients of transfers, may have seen higher ratios of service employment to manufacturing employment than other parts of the country. It seems virtually certain that increasing Federal transfer payments helped support some of the growth of local service employment in the most distressed cities even as manufacturing jobs fell off precipitously.[7]

Thus the exportation of services and net transfers into a region can generate income flows that act like those generated by manufacturing exports: they can be spent and respent in the local economy in the same way as income from manufacturing exports. So flows from service exports and those from transfers have the same local multiplier effect.[8] But transfers are radically different

[6]Richard V. Knight, *Employment Expansion and Metropolitan Trade* (New York: Praeger, 1973). Knight's calculations assume that income flows into SMSAs from other sources—taxes, transfers, and investments—are zero. Thus if positive net transfers have helped fuel some metropolitan service growth, his export figures would be too high.

[7]Some evidence points to transfers as an important factor. From 1970 to 1977, public assistance income rose from 1 percent to 2 percent of aggregate income in central cities, while in nonmetropolitan areas it went from 0.7 percent to 0.9 percent. But the percentage of income from all sources other than wages, salaries, and self-employment—which would include social security and other public and private transfers along with public assistance—rose faster and to a higher level in nonmetropolitan areas than in either central cities or suburbs.

[8]The only differences would stem from the differences in income and tastes of the recipients of these various flows and any restrictions on the use of transfers, as for health service payments, leading to different patterns of consumption of local and imported goods and services. Social security recipients, for instance, have different spending patterns from most wage earners. Thus the local income multiplier for a dollar generated by one inflow probably would differ somewhat from the multi-

from exports when viewed from an economic development perspective.

For sectors where export demand might grow at the national rate of population growth rather than at the local rate, prospects could be strong. Business services could fall into this category for the Philadelphia SMSA, given that their growth rate here has been higher than the national rate, as could certain health services. Some local health services employment growth probably has been fueled by exportation, and national demand is likely to continue to grow, given the overall aging of the population and the continuing upsurge of new medical technology. But to the extent that local growth has been fueled by Federal transfer payments, especially Medicaid, proposed cutbacks could make the future distinctly less rosy.

Demographics and a changing Federal thrust will have effects on other fast-growing sectors. Most of the baby-boom population now is beyond college age, so that cutbacks in educational employment seem fairly likely unless a rising share of the population opts for higher education. Continued legal services employment growth could be clouded over the long run by the current thrust toward deregulation, at least to the extent that deregulation is successful in reducing the complexity and scope of government interaction with business. But the recent lifting of the ban on advertising of legal services could continue to open new markets for lawyers and other legal professionals well into the 1980s.

Thus understanding which factors will drive future local services growth is vital to formulating sound regional economic development policies. And application of the export-base theory to services offers a useful tool for achieving this understanding.

plier for a dollar from another inflow. But in general, services exportation and transfers work substantially through the multiplier without changing its overall value very much.

LESSONS FOR LOCAL DEVELOPMENT POLICY

What is the message that economic development planners in Philadelphia and elsewhere can derive from applying the export-base theory to services?

The first lesson is that the service sector's share of employment will continue to grow locally and nationally. A resurgence of manufacturing employment large enough to take up any appreciable slack in the local labor market seems almost as unlikely as a massive rise in farm employment, and for much the same reason: stronger productivity growth in manufacturing and agriculture, while benefiting consumers greatly by increasing real purchasing power, eliminates jobs in these sectors. Further, there has been a dramatic shift in the location of manufacturing activity out of this region, which policymakers may decry but probably can't reverse. This is not to say that attempts to stimulate certain kinds of manufacturing jobs should not be made. The New England region has benefited greatly from growth in high-technology industries, for example, and benefits do spill over through the multiplier effects to other sectors. The Middle Atlantic also could gain from hi-tech manufacturing industry.

The second lesson is that the service sector's growth is not merely parasitic on manufacturing but is a dynamic force for economic development in its own right. Firms that generate service exports and replace service imports are as vital to target as any others. Such firms can open their doors and expand locally without decreasing employment at other local firms.

A third lesson is that local service industries which have relied heavily on Federal and state transfer payments as a source of growth may face a rocky future. Continued growth could depend on replacing some transfer revenues with revenues from other sources, particularly export demand. Unfortunately, too little is known about the relative strengths of the various forces driving the several service industries, especially at the regional level. Until better information is available, economic development planners will be flying relatively blind when they try to target development efforts and cope with impending changes in the service sector.

While the export-base theory can be applied to the service sector, it fails to capture certain features unique to that sector. Chief among these is the fact that the service sector is a vital ingredient in an area's business climate overall. Restaurants, cultural facilities, sports and entertainment, good public services, and a wide variety of business services provide a desirable framework for the growth of new businesses and the attraction of a labor force. The role of the local service sector in attracting and stimulating jobs in export industries long has been recognized as an important factor in long-run urban growth by economists and urbanologists. The complex interconnectedness of the goods and service sectors thus provides another reason for development-minded policymakers to focus on services.[9]

In short, the manufacturing sector and the service sector both are important contributors to the health of urban economies. Both sectors should be given a careful look by those interested in urban economic development. But like it or not, the bulk of new employment will be in services. Better monitoring of the service sector and a better appreciation of the interlocking nature of the local economy will be required if development efforts are to be targeted in the most cost-effective ways.

[9]Beyond the export issue there are many extremely important questions concerning the services' suitability as a base for urban economic development. Can the new jobs created match the skills of unemployed city residents? Can the service jobs provide an adequate tax base for local governments? Can services anchor neighborhood economic development? Does shifting to services dampen the effect of the business cycle on the local economy?

DIX APPENDIX...

APPENDIX*

PHILADELPHIA SHOWS STRENGTH IN SERVICES EVEN THOUGH TOTAL EMPLOYMENT AND POPULATION SLIP

From 1970 to 1980, total employment in the city of Philadelphia declined by 15 percent—a loss of almost 140,000 jobs. While this loss contrasts with the overall job gain in the SMSA, the city's

Employment Change, 1970-1980
Philadelphia City and the United States

	Percentage Change 1970-1980 City	Percentage Change 1970-1980 U.S.	Index of Relative Performance City vs. U.S.	Population-Adjusted Index City vs. U.S.
Total Employment	-15.0	27.9	.66	.85
Private Sector	-17.3	27.7	.65	.83
Contract Construction	-38.3	24.6	.50	.64
Manufacturing	-42.9	5.1	.54	.69
Transportation and Public Utilities	-22.1	14.2	.68	.87
Wholesale and Retail Trade	-18.8	36.8	.59	.76
Finance, Insurance, and Real Estate	-6.6	41.6	.66	.85
Services and Mining	19.2	54.2	.77	.96
Government	-4.2	28.8	.74	.95
Federal	-20.3	4.9	.76	.97
State and Local	8.2	35.4	.80	1.03
Total Population	-13.4	11.5	.78	—

SOURCE: U.S. Bureau of Labor Statistics, *Philadelphia Employment Trends, 1980*, Regional Report 140, 1981, Table 4, 5.

relative pattern of change across sectors was similar to the SMSA's. The largest loss—about 43 percent, representing over 100,000 jobs—was in manufacturing, while the only nongovernment gains were in services. Even the Finance, Insurance, and Real Estate sector, which showed gains in the SMSA at about half the national rate, declined in the city.

Employment gains were concentrated in health services (particularly hospitals), legal services, and educational services. Educational services actually outperformed the nation and the SMSA over this period, with growth in employment at colleges and universities especially strong. But business services jobs grew only about four percent—good from the point of view of the city's overall employment loss, but weak relative to the SMSA's growth rate, which exceeded the national growth rate of almost 60 percent. Since growth in health, educational, and (to some extent) legal services has depended more heavily than that in business services on transfer flows, prospects for continued services growth in the city may be less promising than for the SMSA.

Services Growth, 1970-1978
Philadelphia City and the United States

	Percentage Change 1970-1978 City	U.S.	Index of Relative Performance City vs. U.S.	Population-Adjusted Index City vs. U.S.
Hotels, Lodging	-35.2	26.7	.51	.62
Personal Services	-38.5	-5.5	.65	.79
Business Services	3.9	59.3	.65	.79
Health Services	42.2	63.1	.87	1.06
Hospitals	36.7	39.9	.98	1.20
Legal Services	60.3	84.2	.87	1.06
Educational Services	58.9	29.6	1.23	1.50
Colleges & Universities	71.6	49.2	1.15	1.40

SOURCES: U.S. Bureau of the Census, *County Business Patterns*, 1970 and 1978.

*The 1970 data are not strictly comparable to 1978 data for some industries because of redefinition. These distortions should be small in most cases.

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on Independence Mall
100 North Sixth Street
Philadelphia, PA 19106

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