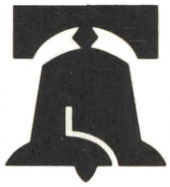
Business Review

Brains in the Old Manufacturing Belt

Higher Food Prices in 1967?



October 1966

Federal Reserve Bank of Philadelphia

Brains in the Old Manufacturing Belt

. . . R&D holds new promise for economic renewal in the nation's older cities. Engineers and scientists are the bedrock for growth. Philadelphia has a firm foundation.

Higher Food Prices in 1967?

. . . If we don't get more rain, the question mark is redundant.

BUSINESS REVIEW is produced in the Department of Research. Donald R. Hulmes prepared the layout and artwork. The authors will be glad to receive comments on their articles.

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In previous articles we have pointed to rapid growth of the research and development industry and to some of the ways a community can encourage home-grown R & D. Basic to an area's development as a research complex is the scientific and technical talent it produces, holds, and attracts. Here we present a profile of . . .

BRAINS IN THE OLD MANUFACTURING BELT

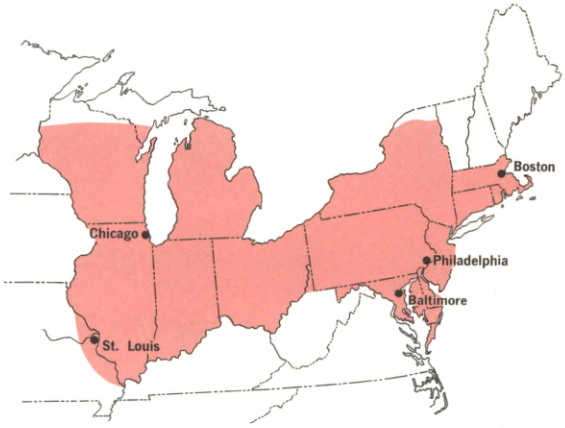
by Elizabeth P. Deutermann

Today, a man with an exceptional mind may be a greater asset to a community's economy than the depth of the local port. That mind is under the scalp of the scientist or engineer working in research and development. Men with these brains generate new ideas, products, and eventually firms and industries. In addition, they attract other scientists and engineers, government and foundation grants, and firms which need a ready pool of research talent. For such reasons—and many more—competition is intensifying among regions to develop R & D talent and hold on to it as an economic asset. Today's city fathers recognize the pulling power of brainpower.

The old manufacturing belt

The area known as the nation's old manufacturing belt (see map) has special reasons for its interest in this competition for human resources. Over the years many of its traditional industries have declined. A number of metropolitan areas in the old manufacturing belt have been enviously observing the country's shift of economic power to the West Coast, the Southwest, and the South. The response of the older communities has been to examine their economies closely. They have been—and are—looking for their best opportunities for economic renewal. One exciting opportunity they see is to increase local participation in the "research revolution."

OLD MANUFACTURING BELT



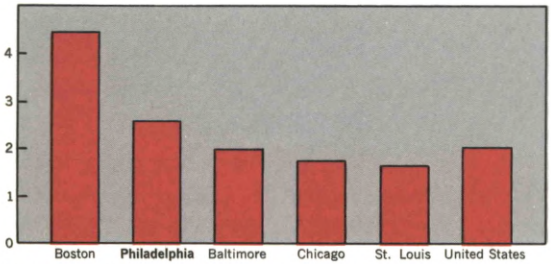
For example, the Philadelphia Metropolitan Area has made many recent strides in this direction.[1] Boston got off to an earlier start than the other old manufacturing centers following World War II and the New England textile decline of the forties. Baltimore and St. Louis are now vigorously promoting their regions' advantages for the location of science-oriented industries. Chicago, on an industry-by-industry basis, has been probing the impact of technological change on its economy. The goal is to uncover opportunities which technological change can bring to Chicago in light of its present and developable assets.

[1] *For further discussion of Philadelphia's R & D development efforts, see the May 1966 issue of the* Business Review, *Federal Reserve Bank of Philadelphia.*

CHART 1

HOW REGIONS RANK AS R&D SPECIALISTS

*The rankings indicate scientists and engineers in research and development relative to total employment in each metropolitan area and the nation.**



** The number of R&D scientists and engineers in the N.S.F. sample survey per 1,000 employees in each area. The total number of R&D scientists is unknown.*
Source: National Science Foundation's National Register of Scientific and Technical Personnel and the U.S. Department of Labor, 1964.

Potential for progress

Growth of research and development in a region depends on many factors. One of the most important is its present brainpower base. An area in which scientists and engineers strongly participate in research and development already has a jump on its competitors. Growth of an R & D center appears to be a cumulative process. Brains attract other brains and the firms which use brainpower as well.

Of the five old manufacturing centers now looking to R & D growth to stimulate their economies, some have this headstart over others. Their economies are already more research-oriented. Chart 1 illustrates this orientation. As it shows, Boston ranks first as the *specialist* in R & D. Philadelphia stands in second place. Baltimore, Chicago, and St. Louis follow. Ranking of areas as specialists in R & D is on the basis of the number of scientists and engineers working in research and development compared to total employment in each region.[2]

[2] *The basic data on scientists were obtained from the National Science Foundation's (NSF) National Register of Scientific and Technical Personnel, see* American Science Manpower, 1964 *(NSF 66-29) in press. Data on engineers for the five Standard Metropolitan Areas were also obtained from the National Register. They are unpublished data from a sample survey conducted by the Engineers Joint Council for the National Science Foundation in 1964. For further details, see* Engineering Manpower in Profile, a *report from the National Engineers Joint Council, 345 East 47th Street, New York, New York 10017 (undated).*

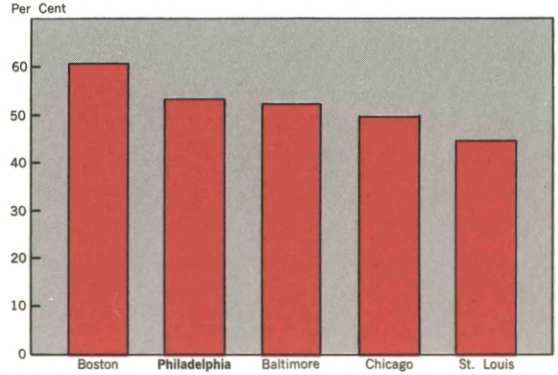
Of particular interest to the Third Federal Reserve District is that only Philadelphia and Boston—among the five regions—rank above the national average as R & D specialists. The case is the same if you consider R & D scientists alone. With respect to engineers, however, Philadelphia slips slightly behind Baltimore. All five regions equal or exceed the national average as centers for engineering research.

Another measure of the importance of R & D shows the five areas ranking in the same order as they do in Chart 1. Chart 2 shows the proportion of all scientists and engineers in each area who are working in research and development. Philadelphia is again in second place—followed closely by Baltimore. Boston maintains the top spot with slightly over 60 per cent of the scientists and

CHART 2

SCIENTISTS AND ENGINEERS SPECIALIZING IN R&D

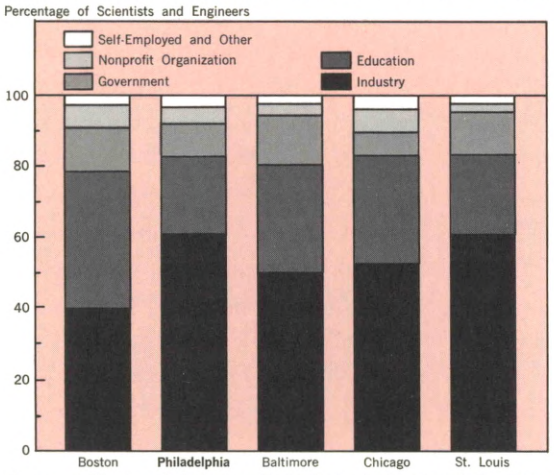
In some metropolitan areas, scientists and engineers are employed to a greater extent in research and development than in others. The chart shows the per cent of scientists and engineers in each area who specialize in R&D.



Source: National Science Foundation's National Register of Scientific and Technical Personnel, 1964.

CHART 3

WHO EMPLOYS SCIENTISTS AND ENGINEERS?



Source: National Science Foundation's National Register of Scientific and Technical Personnel, 1964.

engineers engaged in some aspect of R & D.[3]

The two charts not only indicate the same rank order of specialization in R & D. They also suggest—for the old manufacturing belt—an East Coast attraction for research activity. This has been a source of great concern for the Mid-west in general. Mid-west communities feel they are the trainers and exporters of researchers—to the economic benefit of both East and West Coasts. Apparently Mid-west scientists and engineers are drawn to types of employment other than R & D. They work to a greater degree in such areas as production, consulting, quality control, sales, marketing and construction.

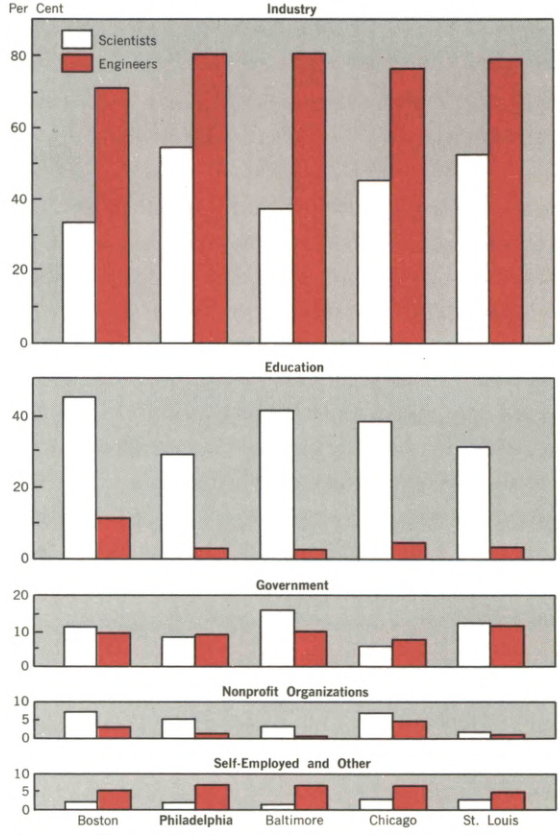
Where talent toils

Where do these old communities find new ideas being generated? Where do the scientists and engineers in each area report to work in the morning? In all five areas, private industry is the major employer. Colleges and universities place second. As Chart 3 shows, around 80 per cent of the scientists and engineers in each area receive paychecks from these two employers. The other brains are working for governments, nonprofit institutions, or are self-employed.

But regions differ in the importance of one type of employer over another. For example, Philadelphia and St. Louis pair off nicely. Around 60 per cent of their scientists and engineers work for private industry; 23 per cent are employed by educational institutions. Chicago and Baltimore also are "look alikes" with a 50 per cent-30 per

CHART 4

ENGINEERS PREFER INDUSTRY



Source: National Science Foundation's National Register of Scientific and Technical Personnel, 1964.

[3] *Engineers are here defined as working in R & D if they reported their major work activity as research, administration of R & D, development, or design. Scientists are so classified if their major work activity is research or the administration of research.*

cent division between industry and education. Boston is somewhat unique among the group. Its scientific talent is almost evenly divided between the two primary employers—industry and education.

When we look at scientists and engineers separately, the employment pattern is more mixed. Scientists are less committed to any one type of employer than are engineers. (See Chart 4) In all five areas, over 70 per cent of the engineers are working for private industry. Scientists, in contrast, spread the talent around more. For example, the highest proportion of scientists employed by any one sector is the 55 per cent working for private industry in Philadelphia.

Scientists and specialization

Whether a scientist in Philadelphia is working for industry or government, he tends to be a mobile person. He may switch employers many times during his career. But his education and job experience classify him as a specialist in some particular field. This specialization is what he takes with him when he changes employers. This is what he has to sell. Specialization of scientists in any one region—with research growth in mind—is also what it has to sell.

The areas we studied have a number of similarities with respect to specialization. For example, in each region more scientists are working in chemistry than in any other major field. This doesn't mean they are necessarily employed by the chemical industry. Some may work for electronics firms; others for petroleum companies.

About 80 per cent of the scientists in each area are working in three fields—chemistry, biology, and physics. And in all communities, except Boston, chemistry holds first place, biology is second, and physics is third. Boston differs in that a higher proportion of its scientists work in physics than in biological sciences. Scientists not in these fields are primarily mathematicians, meteorologists, and earth or agricultural scientists.

In what field, or fields, might each community consider itself the specialist? Comparing the five areas, Philadelphia is a center for chemists. This region has a higher proportion of scientists (55 per cent) working in chemistry than has any of the other metropolitan areas. Boston is the specialist in both physics and math. Baltimore leads the way in biological sciences. Chicago really doesn't "out-specialize" any other area, though it comes close to Philadelphia's specialization in chemistry. In St. Louis a greater proportion of its scientists are working in meteorology and the earth sciences than in the other four regions.

Engineering enterprise

Be it Philadelphia, Boston, Baltimore, Chicago, or St. Louis, engineers specialize in electronics and electrical machinery. Over 30 per cent of the engineers in each community are at work in these two fields. The regions in which the *highest* proportion of engineers are specializing in electronics or electrical machinery are also the three top R & D centers—Boston, Philadelphia, and Baltimore. In all of the metropolitan areas but one, more engineers are working specifically in electronics than in any other specialty. The exception is St. Louis, the lowest ranking of our R & D centers.

Engineers not specializing in these two fields are working in the following areas: materials, mechanics, chemistry, physics, construction, environmental control, mining, aeronautics, and oceanics.

The final product

To what end is this talent directed? What are the final products a community sells as a result of its engineering enterprise? From the major work

interests of the engineers, the answer is no surprise. In all of the areas but St. Louis, electrical or electronic equipment is the end product of the engineers' efforts. More of the work of St. Louis engineers, in contrast, results in new or improved construction materials.

Engineers tend to concentrate on a limited number of market demands in all five regions. In each, 50 per cent or more of the engineers' work is geared toward three end products. However, they differ by region.

In Philadelphia over half of the engineers produce electrical or electronics equipment, chemicals, and aircraft parts—in that order. Sixty-three per cent of Boston's engineers produce electrical or electronic equipment, services, or construction materials.[4] The specialties of both Baltimore and Chicago are the same as Boston's—and also in the same order of importance. The market orientation of St. Louis engineers is toward construction materials first, followed by aircraft parts and services.

Roles engineers play

In meeting these various market demands, engineers perform different functions for the firm. Though an engineer's technical specialty may be electronics, for example, his role in producing an electronic device may range from basic research to production of the prototype through quality control on the assembly line.

The role engineers play in bringing the idea to the market is similar among regions in many respects. In each area the largest proportion of engineers work in either research, design, or as managers of non-research projects. In none of the regions are as many as 10 per cent of the engineers performing any one of the following functions: production, quality control, technical supervision, construction, development, or teaching.

Nevertheless, there are some regional differences in the functions engineers perform. Consulting is an example. Philadelphia is the one region out of the five with fewer than 10 per cent of its engineers working as consultants. Boston, in contrast, has the highest proportion of engineers employed as consultants. Sales provides another example. In all of the communities except Chicago less than 10 per cent of the engineers are working in sales.

Just as engineers in Chicago are more sales-oriented than in other communities, each region has its own functional specialties. In both Philadelphia and Chicago, engineering talent is most heavily concentrated in management—managing projects other than research. More of the engineers in Baltimore and St. Louis work in the field of design than in any other functional area. The greatest proportion of Boston's engineers are in research.

Brains on balance

What makes these scientists and engineers economic assets to their communities is their talent and training. We haven't tried to measure talent. Even measuring training presents problems. Many men working in research and development have received a large part of their training on the job. In addition, many important research contributions have originated with college, if not high school, dropouts.

Nonetheless, in order to do R & D today, engineers and scientists find it increasingly important to have a degree above the bachelor's level—and preferably the Ph.D. Companies, too, regard the absolute number of doctorates on their payrolls to be a considerable asset. Firms actually find potential contractors counting the *number* of

[4] *Services include such activities as transportation, education, communications, and utilities.*

Ph.D's on their staffs to use as a criterion for awarding a research contract.

The educational attainment of scientists and engineers varies among the five communities under scrutiny. Looking at scientists first, how do the five regions stack up in sheepskins? To find out, we measured the proportion of scientists in each area who had at least a Ph.D. or medical degree. The results show Philadelphia in third place—trailing Boston and Baltimore and leading Chicago and St. Louis.

This ranking is surprisingly close to our initial rankings of these areas as R & D centers. The communities with the highest proportion of scientists and engineers in R & D also tend to have the highest proportion of scientists with doctorates. Only one thing prevents a perfect match. Baltimore pulls ahead of Philadelphia with a higher percentage of scientists with doctorates, while Philadelphia places one step above Baltimore as an R & D center.

To measure engineering training, we looked at masters' degrees as well as doctorates. Among engineers, as opposed to scientists, the doctorate is less essential for work in research and development. But the master's degree is becoming essential, as the doctorate may be in the not too distant future.

How do our five communities rank in educated engineers? Once again Boston comes out first by a substantial margin. The proportion of engineers who have at least master's or doctorate degrees in the other four areas differ only slightly. In rank order, however, St. Louis is in second place, followed by Philadelphia, Chicago and Baltimore.

Building on the brainpower base

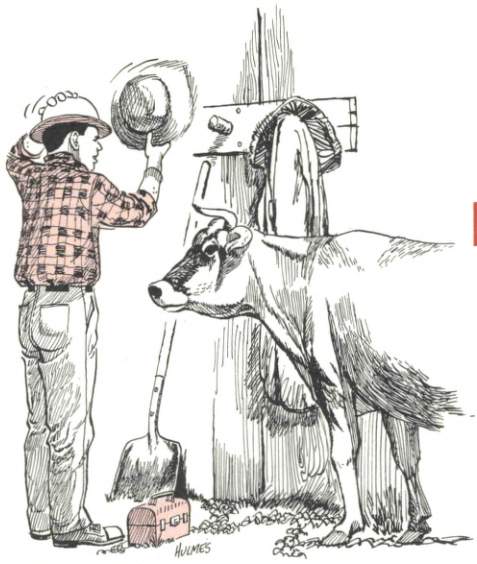
Here we have presented a profile of technical talent in five communities of the old manufacturing belt. The profile highlights where the brains reside, what special talents they possess, and their educational attainment.

From this investigation, the largest metropolitan area in the Third Federal Reserve District, Philadelphia, emerges as a region of considerable potential for R & D growth. Philadelphia already has a strong manpower pool of scientists and engineers engaged in research. It has the human foundation for cumulative growth as a research complex. Its strength in chemistry and electrical engineering, particularly, can give substantial impetus to such growth. The thrust of this impetus can have still greater force if the area's engineers become more research oriented—working, for example, to a larger degree at the frontiers of electronics. In addition, more Ph.D.'s in the region's scientific community should further enhance its competitive position as a research and development complex.

In general, scientists and engineers in each metropolitan area are the generators of innovations which help a region grow as a research center. Local community leadership must use its talents to produce, attract, and hold more of these men and women in order to speed R & D growth. Beyond that, those concerned with regional economic development must learn to really know their brainpower assets.

Here we have provided an overview of five regions' research resources. But each community aspiring to become an R & D complex must probe further. In-depth knowledge of the unique research strengths and weaknesses in any area is required if aspirations are to become realities. This is the starting point for capitalizing on those strengths—and strengthening the weaknesses—as changing technology presents new opportunities for local economic growth.

The fifth consecutive year of drought raises the question . . .



HIGHER FOOD PRICES IN 1967?

by Kevin G. Woelflein

Rising food prices got headline attention this summer across the nation. They increased at a 4.7 per cent annual rate in the first eight months of 1966 partly because of poor growing conditions in most of the country. Agricultural specialists tell us that the Philadelphia Federal Reserve District was worse off than other areas. The most drought-stricken region of the country was around southeastern Pennsylvania, southern New Jersey, Delaware and northern Maryland—essentially the Philadelphia milk shed.

This is a highly industrialized area, normally dependent on the Midwest for much of its food. Nevertheless, some of the most productive farms found anywhere are located within the district. They supply eggs, fresh milk, poultry, fruit and vegetables to the rapidly expanding metropolitan population. When growing conditions are good on these district farms, better food bargains can be found in Philadelphia than in most major cities. But, in addition to fertile soil and good management, farms need rain. And that's precisely what we didn't have much of this past summer. Less than one inch of rain fell, for example, on the important farm counties of Lancaster and York, Pennsylvania, during June and July; seven is normal.

Hot, dry weather, following spring frosts, reduced yield and quality of the district's produce more this year than last. Prices quickly reflected the reduced supply. From May through August, Pennsylvania crop and livestock prices increased at an annual rate of 10 per cent. Likewise, prices for Delaware and New Jersey vegetables and fruit surged above 1965 levels. However, the improvement in prices was not sufficient to offset reduced yields. Thus, farm net income will be off sharply.

Less milk—higher prices in 1967?

The 1966 drought, aside from being the fifth in a row, is noteworthy because it was the worst of all. Its chief impact on dairying was to cut production of corn grain about 50 per cent below normal. When the ears failed to develop this year, most farmers cut the corn stalks for silage. To make up for lost local grain production,

dairymen must buy from large Western farms. District farmers normally import feed, but in each year of drought the amounts have increased. Thus dairymen have faced sharply higher costs at the end of each year because it has cost them more to import than grow.

Farmers are certain 1966-1967 feed costs will be higher than last year. The situation would have been worse if abundant spring rain had not pushed hay and small grain yields to near-record levels before the drought. But with the drought came below normal production in many parts of the country, so that national supplies of feed grains for winter use are expected to be lower than a year ago. To complicate matters further, less feed grains are available from the Government because reserves were depleted in previous years.

What does this have to do with the price of milk? Local farms provide all but a small part of milk needed in the district. In the past five years, milk prices have increased slowly as costs increased faster at dairy farms. This cut profits. On the average, 2,000 fluid milk producers in Pennsylvania sold out each year, 1961-1965. But in the past twelve months, the trend has accelerated; in Pennsylvania 3,400 have quit. Over 5 per cent of the Pennsylvania dairy herd has been slaughtered since August 1965. More slaughtering will follow as feed runs out this fall. High beef prices provide an added inducement. Significantly, milk production in this district will fall below previous years. To supply local needs, milk will have to be shipped longer distances than normally. Costs will increase, ultimately showing up in higher prices at the store.

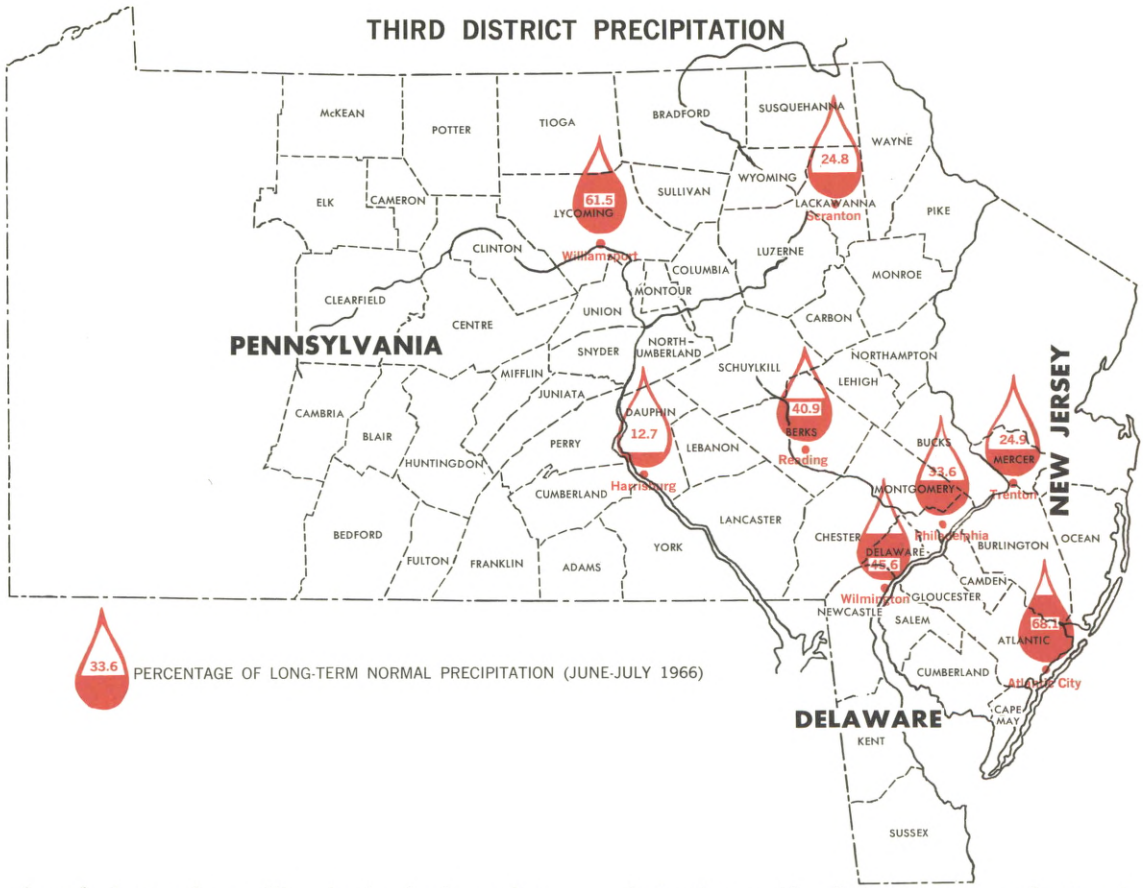
The rub is that nationwide production of milk is also running below both 1964 and 1965 levels. Thus, milk is in shorter supply in other areas also. In 1966, the regulated price of milk was raised to induce more production. Judging by the numbers of farmers swapping straw hats for hard hats, the increase has not provided enough incentive to stay in dairying. Perhaps more price increases will be made to stop the decline in milk production. If so, this is bad news for consumers.

Vegetables suffered losses

Drought also cut the yield of most vegetables in the district. But even before the dry weather, May frost killed many newly transplanted tomatoes. In some cases food processors gave the farmers new plants, but for most growers the season started with an unusual loss. Irrigation partially made up for the lack of rain in New Jersey. It couldn't do the complete job of providing moisture, so the tomato crop was only 70 per cent of normal. In York County, Pennsylvania, where irrigation is rare, tomato yield and quality suffered accordingly. The crop was only 40 per cent of normal and undersized. Prices were up all season, especially during the airline strike, when some growers made added profit because California tomatoes and asparagus could not reach Eastern markets. For the large majority of vegetable growers, this year's net income was one of the worst on record.

In those southeastern counties of Pennsylvania where snap beans, limas and other vegetables are grown without the aid of irrigation, yields were very low. Some isolated farms managed to produce a fair crop, even in the driest areas. For those few farmers, the high market prices were a boon, unless they were on price contract to a food processor. But in most cases, prices did not rise sufficiently to keep total farm income from going down.

In New Jersey about half the vegetables are grown on contract. It is the farmer's way of getting a guaranteed price for all he grows. In years when crops are abundant, contract farmers



often do better than selling in the fresh market. This has not necessarily been true in the past three years. Crops have been less abundant and many fresh-market farmers sold their produce at prices higher than contract. This year, prices for fresh-market tomatoes were 50 per cent above contract in some locations.

Occasionally, processors, needing produce to keep canneries running, paid higher prices on the fresh market. These added costs are beginning to show up at the supermarket now. Contract farmers, eyeing 1966 fresh-market profits, will strike a hard bargain before the 1967 crop is planted. This will add to processor costs and most likely mean a higher price on the can next year.

Irrigation paid off in potato production in Delaware and New Jersey. Yields were about 95 per cent of normal. Prices were up generally; Kent County, Delaware reported as much as 25 per cent above a year ago. Thus, income of potato farmers increased this year. In Pennsylvania, irrigation was not available, output was poor, and some fields were abandoned.

Onion and cucumber farmers were happy this year. Yields were good and, because of poor crops in other parts of the country, prices were about double 1965 levels. These were exceptions illustrating the uneven impact of poor weather.

The number one cash crop in Lancaster County is tobacco. Cold weather hurt the crop during

transplanting. Drought did more damage, so the fields looked poor and uneven most of the summer. A little August rain made surprising improvements and saved the crop from disaster. Yields will be down about 25 per cent from normal; income will be down slightly less, percentagewise.

Frost killed fruit blossoms

The 1966 season started poorly for peaches and apples grown mainly in Adams, Franklin and York Counties, Pennsylvania and in Gloucester County, New Jersey. Frost in early May killed blossoms, thus reducing prospective yield about 25 per cent. Some New Jersey counties were given disaster aid immediately. Cold weather during pollination and hot, dry weather in the main growing season reduced yields more. Franklin County peach production—30 per cent of normal —was the worst in the district. Proceeding eastward, the average yield and size picked up. Even so, it didn't get much above 65 per cent of normal in the best locations. District peach prices were up from 25 to 100 per cent over last year. Exceptional fruit brought higher prices in a few reported instances.

There are fewer apples this year and prices are higher. Fortunately, heavy rain fell in late September in time to help size fruit and keep income from sinking to lower levels.

Cherries were in short supply because of spring frost. In Adams County where most of the district cherry crop is grown, only 40 per cent of a normal crop was produced. Growers' income improved, however, because prices were three times the level of 1965.

Poultry and egg demand up

District poultry farms, especially egg producers, had one of the best years in recent times; these farms provide the second most important source of farm income in the Philadelphia Federal Reserve District. Summer egg prices equaled the highest level in about five years. The most important reason for the improvement was declining egg production nationally. This happened because poultrymen culled flocks when overproduction softened egg prices earlier. However, increased egg purchases by the Army added to normal demand this year. In response, egg inventories dropped and prices increased. Eggs should be cheaper this winter because many more chicks hatched this spring; they will be producing eggs heavily around Christmas time.

Consumers purchased more broilers this year because prices of other foods went up. Total production in the U.S. is about 7 per cent ahead of 1965. Broiler prices should remain stable as they did this year or even go a little lower as substitute foods like pork and eggs flow to market in greater abundance. Holiday supplies of turkeys are plentiful and prices should be about the same as a year ago.

Widespread labor shortage

All county agricultural agents in our survey mentioned labor shortages as a problem second only to drought. Supply of farm workers continues to decline. In Pennsylvania, for example, hired farm labor dropped from 31,000 to 20,000, 1961-1965. Industry siphoned off most of these. For the farmer, there are two choices—mechanize or sell out. For many, the first alternative is eliminated because five years of drought drained their financial reserves. Vegetable farmers in New Jersey and Delaware depend on migrant farm hands from Puerto Rico and "day haul" labor from Philadelphia. These sources are drying up also as industrial expansion continues. New Jersey's pioneer minimum wage rate for

farm hands did little to relieve the labor shortage. It is doubtful that all crops would have been harvested if yields were normal.

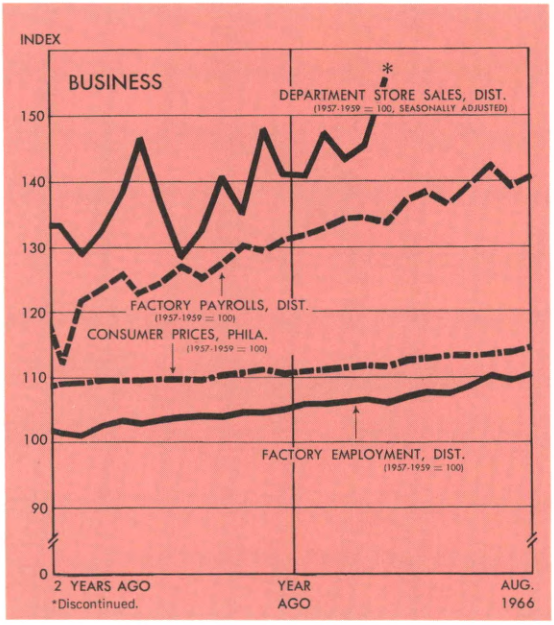
What about next year

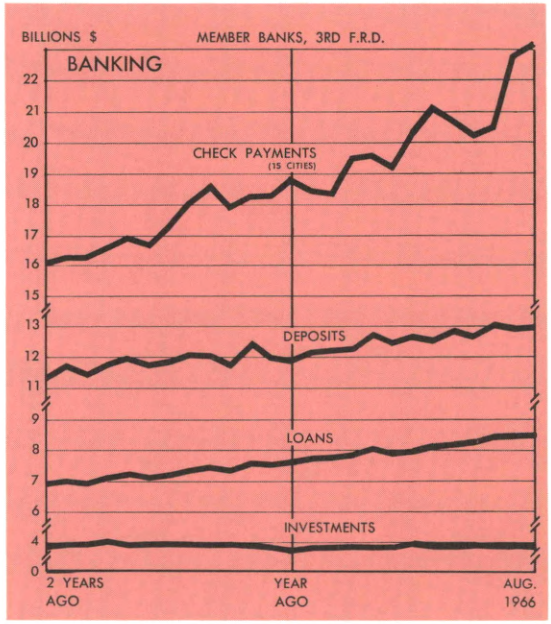
Milk and dairy product prices are likely to continue upward in the Third Federal Reserve District until herds are rebuilt and production achieves a better balance with demand. This may take several years even if local feed-growing and pasture conditions improve drastically in 1967. More normal yields of fruit and vegetables next year could sharply lower fresh-market prices from 1966 levels.

Egg prices in 1967 are likely to drop because egg production will rise faster than demand. Broiler prices will remain near current levels. Further efficiencies on the large integrated poultry farms are likely to offset increased costs.

Heavy rainfall in late September helped restore water levels and improve the quality of late crops. It came too late to be very significant this year, but if it is an indicator of an upturn in the rain cycle, the outlook on the farm should be brighter next year.

FOR THE RECORD . . .





SUMMARY

	Third Federal Reserve District			United States		
	Per cent change			Per cent change		
	August 1966 from		8 mos. 1966 from year ago	August 1966 from		8 mos. 1966 from year ago
	mo. ago	year ago		mo. ago	year ago	
MANUFACTURING						
Production	.....	.....	.....	+ 4	+10	+10
Electric power consumed	+ 6	+ 9	+ 9	.....	.....	.....
Man-hours, total*	+ 1	+ 3	+ 4	.....	.....	.....
Employment, total	+ 1	+ 3	+ 4	.....	.....	.....
Wage income*	+ 1	+ 7	+ 8	.....	.....	.....
CONSTRUCTION**	−29	−14	− 2	−10	+ 1	+ 6
COAL PRODUCTION	+32	+ 7	− 2	+37	+ 5	+ 2
BANKING						
(All member banks)						
Deposits	0	+ 9	+ 7	0	+ 8	+ 8
Loans	0	+11	+11	0	+12	+13
Investments	− 1	+ 1	− 1	+ 1	+ 1	+ 1
U.S. Govt. securities	0	− 7	− 9	+ 2	− 5	− 8
Other	− 2	+12	+11	− 1	+ 9	+11
Check payments***	+ 2†	+23†	+17†	+ 3	+19	+15
PRICES						
Wholesale	.....	.....	.....	0	+ 4	+ 4
Consumer	+ 1‡	+ 4‡	+ 3‡	0	+ 3	+ 3

*Production workers only
**Value of contracts
***Adjusted for seasonal variation

†15 SMSA's
‡Philadelphia

LOCAL CHANGES

Standard Metropolitan Statistical Areas*	Manufacturing				Banking			
	Employment		Payrolls		Check Payments**		Total Deposits***	
	Per cent change August 1966 from							
	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago
Wilmington	0	+ 4	− 7	0	+ 2	+77	− 3	0
Atlantic City	.....	.....	.....	.....	+ 4	+10	+ 7	+16
Trenton	+ 2	+ 2	+ 3	+ 8	+22	+24	0	+ 9
Altoona	− 1	+12	+ 1	+14	+ 8	+22	+ 2	+13
Harrisburg	+ 1	+ 5	0	+ 8	− 1	+12	− 1	+ 8
Johnstown	0	+ 2	− 4	+ 4	+ 5	+11	0	+ 5
Lancaster	+ 1	+ 6	+ 5	+11	− 5	+ 9	0	+10
Lehigh Valley	0	+ 1	0	+ 5	+ 8	+18	0	+ 5
Philadelphia	0	+ 4	0	+ 9	+ 1	+13	+ 1	+13
Reading	+ 1	+ 1	+ 1	+ 1	+ 1	+ 5	+ 2	−37
Scranton	+ 2	+ 4	+ 6	+14	+ 1	+ 7	+ 1	+11
Wilkes-Barre	+ 1	+ 9	+ 3	+17	+ 3	+ 7	+ 1	+ 7
York	+ 2	+ 5	+ 4	+11	0	+24	0	+ 5

*Not restricted to corporate limits of cities but covers areas of one or more counties.
**All commercial banks. Adjusted for seasonal variation.
***Member banks only. Last Wednesday of the month.