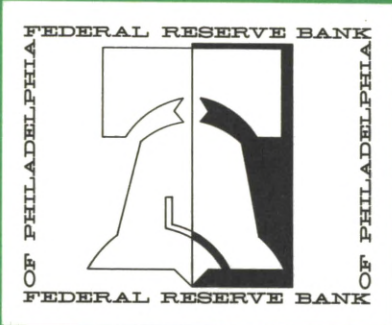


BUSINESS REVIEW



February 1969

FEDERAL RESERVE BANK OF PHILADELPHIA

FEDERAL RESERVE POLICY:
PRESSURE IS BEGINNING TO PAY OFF
MAKING ECONOMIC SENSE OUT OF GRANTS-IN-AID
A JOGTROT THROUGH PENN'S WOODS

Federal Reserve Policy: Pressure is Beginning to Pay Off

by David P. Eastburn

It is of course disquieting to see prices continuing to rise. The fact that wholesale prices of industrial commodities increased at an annual rate of 6.5 per cent in January is clear evidence that inflation is still very much with us. And the persistently low level of this country's balance of trade is not just a coincidence. Nevertheless, this kind of news should be taken calmly—not complacently but calmly. The Federal Reserve's policy of steady, unrelenting pressure is beginning to pay off.

The rationale for the Fed's policy stance is based on the nature of the problems it confronts. Inflation is the number-one problem now, but actions to deal with it will have an effect on the level of unemployment. Desirable as it might be to slow inflation without raising unemployment, this happy combination seems too much to expect. Less rapid rates of economic growth are necessary to dampen inflationary pressures. It is clear, however, who will be laid off first, and what would be the impact on businessmen's efforts to employ the hard core should the economy slow substantially. Consequently, Federal Reserve officials must constantly weigh the benefits of reducing inflation against the costs—social as well as economic—of more unemployment. One way to reduce these costs is to apply restraint gradually, giving the economy time to adjust with a minimum of dislocation and layoffs.

This is the Federal Reserve's current policy. Sharp moves that induce a credit crunch might well succeed in breaking the back of inflation, but it also could break the spirit of many of the nation's disadvantaged at a time when their expectations have been rising.

The steady approach, unfortunately, means that much of the effects of rapid growth in money and credit during last summer and fall must be written off. To compensate for it now by a drastic contraction would be very costly. Accordingly, prices will continue to rise faster in the months ahead than would be desirable, and may give a misleading impression of progress made in fighting inflation.

Indeed, the facts indicate considerable progress. In recent weeks, growth in the money supply has slowed considerably and bank credit has actually declined. Banks—no longer just the big ones in New York City but smaller banks elsewhere as well—increasingly are feeling a squeeze in their ability to raise funds. They are passing on their attitudes as well as higher costs to borrowers.

The pace of the economy's growth is slowing, perhaps not so much as needed to have maximum effect on inflation, given our concern over unemployment, but the trend is unmistakably in the right direction. Continued pressure on money and credit will help to keep it in the right direction.

As the effects of this pressure work themselves out in succeeding months, the pace of the economy's growth will slow further. Indeed, there are a few signs that such a slowdown is already occurring. Inflation is still with us, and given the fact that policy effects are felt only after some delay, it will be with us for some months yet. But the forces to stop it are already at work; their effects will be increasingly clear in the weeks ahead.

Making Economic Sense Out Of Grants-in-Aid

by Edward G. Boehne

A growing number of state and local governments are finding themselves in a severe financial bind because their expenditure responsibilities are outpacing their own ability to raise revenues. Consequently, many governors and mayors are beating a path to Washington in search of help from the national coffers. And federal officials have responded with grants. Up to the present, these grants—called *conditional grants*—have had “strings” attached. Now the call is heard for federal revenue-sharing in the form of *unconditional grants* with “no strings” as to how the money is spent at the state and local levels.

The sharp contrast between existing conditional grants and proposals for unconditional grants raises an obvious question: are conditional and unconditional grants alternative solutions to the same fiscal problem, or is there a rationale for *both* types of grants? The answer, in a nutshell, is that in the context of our national-state-local system of government *both* types of grants make economic sense. Conditional grants are ideal for supporting those public services which are performed at the state-local level but whose benefits spill over to adjoining communities and perhaps the nation as a whole. Unconditional grants, on the other hand, are well-suited for arresting the fiscal imbalance which has arisen because the ability of many states and localities to raise revenue is not keeping pace with their burgeoning responsibilities.

EXISTING FEDERAL GRANTS-IN-AID

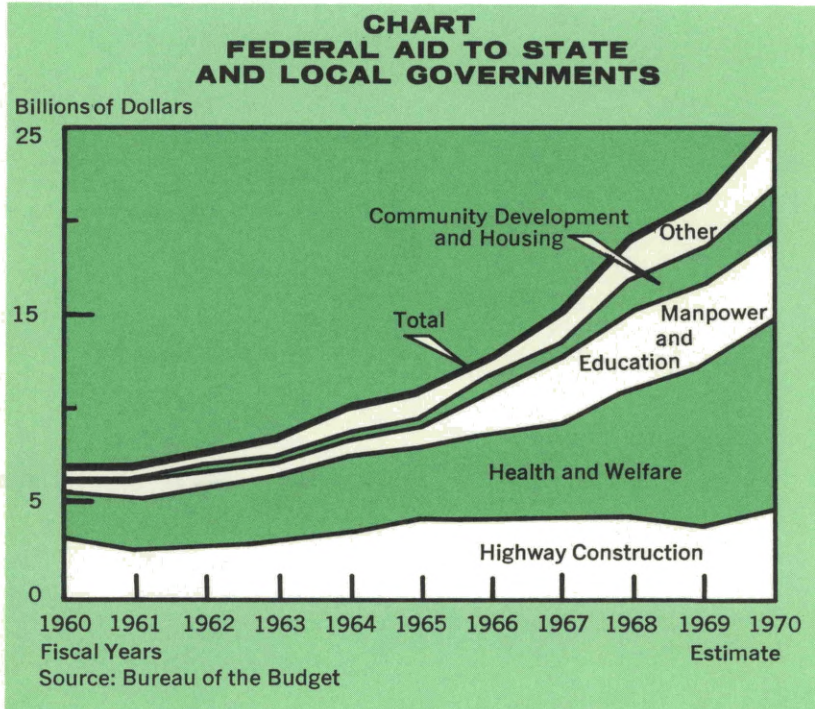
All existing federal grants to state and local government are conditional. That is, they come with a number of fiscal conditions. First, funds must be used for specific purposes; they cannot be tossed into a pool of funds and be used for

general financing of state-local services. Second, grants are typically apportioned on the basis of need as measured, say, by population. Third, in some cases the amount of aid is also determined by the ability of states and localities to raise their own tax revenue. For example, under the School Lunch and Mental Health programs low-income states receive more aid per capita than do high-income states. Fourth, federal grants are most often matching, requiring the recipient to come up with some funds on its own. On average, recipients of conditional grants must raise \$1 for every \$2 received from Washington. Fifth, grants are closed-end. That is, the Federal Government will continue to put up money only so long as its total contribution is below some limit.

Conditional grants from the Federal Government to state and local units will have about

tripled in the 1960's—soaring from \$7 billion in 1960 to an estimated \$21 billion in 1969, as shown in the chart. And by 1970 conditional grants are estimated to total \$25 billion. Federal grants now account for 18 per cent of state-local revenue, compared to 14 per cent in 1960. It is clear that federal grants have assumed a substantial role in financing public services at all levels of government.

The bulk of federal aid is earmarked for highway construction, health and welfare services, and education and manpower programs, with community development and housing projects accounting for an increasing share of total grants (see chart). Such well-known public programs as interstate highway construction, Model Cities, Head Start, Teachers' Corps and Food Stamp programs are included under these broad headings.



RATIONALE FOR CONDITIONAL GRANTS

Presumably when city councilmen, state legislators, or individual citizens decide on the types and magnitudes of public expenditures, they base their decisions on some kind of trade-off between costs and benefits. Fire and police protection, public libraries and mass transit systems, for example, cost a good deal of money. But each of these public services also provides benefits. The object is to maximize the benefits that can be obtained from the limited resources available.

If citizens of the governmental unit which pays for public goods and services receive all of the benefits from their expenditures, the benefit-cost calculation is fairly straightforward. Each public good or service is weighed on the merits of its *total benefits* and on the burdens of its *total costs*.

But what happens when a substantial share of the benefits of local (or state) expenditures spill over into adjoining communities or states, or spill out over the entire nation? Total benefits are now not weighed against total costs. Rather, only those benefits received by the paying community are weighed against total costs. So, it is possible that an individual community or state might decide against spending its scarce dollars on a given project because the benefits *it* receives do not justify the costs *it* pays. But the total benefits flowing to all citizens—whether inside or outside the state or community which foots the bill—may more than justify the cost of the project.

An example is public higher education. State legislatures parceling out funds tend to favor undergraduate and professional education in law, medicine, and dentistry over graduate studies in the humanities, social sciences, and natural sciences because a higher percentage of

those with baccalaureate degrees and graduates from professional schools are more likely to remain in the state as teachers, businessmen, government officials, lawyers, dentists, and physicians that are Ph.D. recipients in physics, French, or economics. From the vantage point of a single state, therefore, a legislator might easily reason that the benefit return from a dollar spent on undergraduate and professional education is greater than a dollar spent on graduate education. But from a national viewpoint the result may be a less-than-optimal flow of state-appropriated funds for graduate education. Research projects need to be manned and college faculties need to be staffed even though those qualified to fill these positions may be trained in Pennsylvania and may later work in California.

Therefore, a strong case exists for the Federal Government to support financially those public services (like graduate education) produced at the state and local levels whose benefits spill over in substantial amounts to the entire nation. Such benefits are no less real than those which are restricted to one locality or region. To ignore them would seriously hamper efficient use of the nation's resources.

Necessary conditions. At least two conditions are required if grants are to compensate effectively for spillovers. First, grants compensating for spill overs should be functional in nature. That is, funds need to be used specifically to finance services whose benefits spill over. Otherwise, recipients could use the money to finance services whose benefits are more local or regional.

Second, grants should be of the matching type. If, for example, one-half of the benefits of a particular state program spill over to the rest of the nation, then the total cost of the project should be borne equally by federal and state governments. But if one-tenth of the

GEOGRAPHICAL SCOPE OF SPILLOVER BENEFITS

Some of those public services whose benefits primarily accrue locally, regionally, or nationally are listed below.

- | | |
|------------------------------|--|
| 1. Local ^a | Fire Protection
Police Protection
Parks and Recreation
Public Libraries
Water Distribution
City Streets |
| 2. Intermediate ^b | Air and Water Pollution
Water Supply
Parks and Recreation
Public Libraries
Sewage and Refuse Disposal
Mass Transit
Arterial Streets and Intercity Highways
Airports
Urban Planning and Renewal |
| 3. Federal ^c | Education
Parks and Recreation
Aid to Low-Income Groups
Communicable Disease Control
Research |

^a Services with few important benefit spillovers beyond the local level of government.

^b Services with significant spillovers beyond the local level but not beyond the regional level.

^c Services with significant spillovers beyond the regional level.

Source: George F. Break, *Intergovernmental Fiscal Relations in the United States* (Brookings Institution), 1967, p. 69.

For example, the Easton, Pennsylvania, police and fire departments basically provide services to Easton and little benefit spillover occurs. Philadelphia International Airport, on the other hand, provides services to the entire region as well as to the City of Philadelphia. Water and air antipollution projects generate benefits well beyond the boundaries of individual cities, metropolitan areas, and in some cases even states. Educational benefits spill over from individual communities to entire states; and benefits from higher public education, in turn, spill over from individual states throughout the entire nation.

benefits spill over, then grants should pay for only one-tenth of the total cost. In other words, for those services having benefit spillovers to be ranked on an equal footing with those whose benefits are purely local, the dollar value of conditional grants ought to be the same percentage of total cost as is the proportion of spillover benefits to total benefits. Unfortunately, economic measures of spillover benefits lack this kind of precision. This suggests that until such precision is attained “guesstimates” of spillover magnitudes will have to be made.

Ideally, a third requirement for the most efficient use of conditional grants is that they should be open ended. That is, there should be no fixed upper limit on the total amount of grants. Spillovers do not cease at these artificial ceilings and neither does the case for efficient allocation of resources. Of course, the Federal Government would be reluctant to issue a *carte blanche* for all funds state and local officials might like.

RATIONALE FOR UNCONDITIONAL GRANTS

It is apparent that conditional grants can play a vital role in our intergovernmental system. But it is also clear that conditional grants, with their many “strings,” are unsuited to reduce the fiscal disparities which arise because *general* expenditures outpace *general* revenues at the state-local level. What states and localities need is a *general* revenue supplement to add to their tax receipts so they can provide a greater volume of purely state and local public services. Unlike compensating for spillovers, specific interference by the Federal Government on the spending side is unnecessary because the same state or local jurisdictions which receive the benefits also select them through their choices of public services.

Revenue-Sharing Proposals. Unconditional grants-in-aid, in the form of revenue-sharing,

have gained widespread attention and bipartisan support as a remedy for the general fiscal imbalances plaguing states and localities.¹ Although individual proposals for revenue-sharing have varied in detail, the basic characteristics are: (1) the Federal Government would allocate a specific percentage, say 1 or 2 per cent, of its income-tax base annually to states or localities, or both;² (2) aid recipients would have discretion on the use of the revenue; (3) allotment of funds would be on a per capita basis, thus affording some redistribution of tax receipts from high-income to low-income areas.³

The significance of the last of these three characteristics is perhaps least understood. Per capita distribution of grant money is a compromise of pragmatic necessity. Ideally, unconditional aid ought to be apportioned on the basis of need for public services and tax-raising ability. Given social values, need depends not only on population, but also on age distribution, density of population, income distribution and local cost factors. Taxing ability, on the other

¹The revenue-sharing idea originally came from Walter Heller, Chairman of the President's Council of Economic Advisors from 1961-1964. See *U.S. News and World Report*, June 29, 1964, p. 59. For a later and more detailed version of the proposal, see Walter Heller, *New Dimensions of Political Economy* (Harvard University Press, 1966) Chapter III.

The bipartisan support for revenue-sharing is exemplified by the backing given to it by Candidates Hubert Humphrey and Richard Nixon in the recent presidential campaign.

Besides alleviating the financial squeeze of state and local governments, revenue-sharing was originally advocated also as a way of spending the so-called “fiscal dividend”—a term applied to the difference between automatic increases in federal revenues because of economic growth and increases in federal spending. The rapid rise in military spending since 1965, however, has left no fiscal dividend to spend. With optimism rising for an end to the Vietnam War, there is again talk of a fiscal dividend—and with it a rejuvenated interest in revenue-sharing on the part of federal officials.

²At 2 per cent, the dollar amount of revenue-sharing in 1969 would be approximately \$6.5-7 billion per year.

³The redistribution occurs because high-income areas pay more per capita in federal taxes than do low-income areas.

hand, depends on per capita personal income as well as property and sales tax bases. But to construct an allotment formula to include all these variables would be difficult and probably not politically feasible. So, per capita aid distribution provides a simple, albeit crude, allotment criterion.

Nonetheless, because some jurisdictions, notably central cities of urban complexes, bear a disproportionate share of the fiscal burdens plaguing state and local governments, some additional aid—over and above a general per capita distribution—may be necessary. A recent study points out that the deepening fiscal crisis in American cities is caused by the rising number of underprivileged citizens concentrated in urban centers.⁴ At the same time, tax bases of cities are growing at a decreasing rate or in some cases actually declining. As a result, local taxes in central cities take about a third more of their residents' personal income than do taxes in suburbs. Even a rising tax effort in central cities, however, has been insufficient to keep them on a par with suburbia. In 1957, for example, central cities spent \$9 more per pupil on education than did suburbs. By 1965, central cities had fallen behind (\$574 to \$449) suburban jurisdictions.

Some proposals for revenue-sharing, therefore, call for only 90 per cent of the shared revenue to be allotted strictly on a population basis. The remaining 10 per cent would then be apportioned to the poorest states and the need-

iest central cities. Under this plan, the simplicity of per capita distribution could be maintained and the fiscal disparities among localities and states mitigated as well.

CONCLUSIONS

If all public services were performed and financed centrally, ideally the tax resources of the entire nation would be pooled and distributed throughout the country according to need. There would be no imbalance between expenditure responsibility and revenue-raising ability, and the geographical spillover of benefits would not be a problem. But for political, historical, and economic reasons, American Government is decentralized within a federalist system.

Given our system of multi-level government, grants-in-aid make economic sense. On the one hand, conditional grants are especially well-suited to compensate jurisdictions for services which cause significant benefit spillovers to citizens of other jurisdictions. On the other hand, unconditional grants-in-aid provide an ideal means of mitigating fiscal imbalances.

In practice, the roles of conditional and unconditional grants are blurred. The distinction between those benefits which remain internal and those which spill over and become external is most imprecise. What constitutes taxable capacity and a reasonable tax burden are far from objectively determined. But lack of clarity, precision, and objectivity do not cause the fiscal problems of federalism to diminish. In fact, the problems are becoming increasingly evident. There is, therefore, much to be said for making sensible use of grants-in-aid in financing multi-level government—and that includes provision for both types of grants, conditional as well as unconditional.

⁴Advisory Commission on Intergovernmental Relations, *Fiscal Balance in the American Federal System*, Vol. 2 ("Metropolitan Fiscal Disparities"), Washington, D.C., October 1967. For an analysis of fiscal disparities in the Philadelphia Metropolitan Area, see Richard W. Epps, "The Metropolitan Money Gap," *Business Review*, Federal Reserve Bank of Philadelphia, June, 1968.

SELECTED BIBLIOGRAPHY

Break, George F. *Intergovernmental Fiscal Relations in the United States*, Washington, D. C., The Brookings Institution, 1967.

"Federal Aid to State and Local Governments," *Special Analysis, Budget of the United States, 1970*, Washington, D.C., U.S. Government Printing Office, 1969.

Fiscal Balance in the American Federal System, Vols. 1 and 2, Advisory Commission on Intergovernmental Relations, Washington, D.C., U.S. Government Printing Office, October 1967.

Heller, Walter W. *New Dimensions of Political Economy* (especially Chapter III, "Strengthening the Fiscal Base of Our Federalism"), Cambridge, Massachusetts, Harvard University Press, 1966.

Measures of State and Local Fiscal Capacity and Tax Effort, Advisory Commission on Intergovernmental Relations, Washington, D.C., U.S. Government Printing Office, October 1962.

Pechman, Joseph A. "Financing State and Local Government," *A Symposium on Federal Taxation*, New York, American Bankers Association, 1965.

Revenue Sharing and Its Alternatives; What Future for Fiscal Federalism? Vols. I-III, Joint Economic Committee, Congress of the United States, Washington, D.C., U.S. Government Printing Office, 1967.

A Jogtrot Through Penn's Woods

by Evan B. Alderfer

Ten years ago we took a tour with the chief forester into Penn's Woods and reported on the venture in the September 1958 *Business Review*. Now we take a jogtrot through the woods and the forest literature to see what changes have been wrought. Our report is based upon field work of professional foresters summarized by the Northeastern Forest Experiment Station in its 1968 publication, "The Timber Resources of Pennsylvania."

Between the foresters' 1955 survey and their 1965 re-survey, the Commonwealth's commercial forests have grown in acreage, in standing timber, in sawtimber volume. And the annual growth exceeds the annual cut. Encouraging developments indeed are these in an age notorious for its pollution and plunder of natural resources.

THE ADVANCING FOREST

More than half of Pennsylvania's land area is a forest; thus, the state continues to live up to its name. Moreover, there was a 10 per cent gain in forest acreage in the decade between

surveys. This increase may come as a surprise to all but the forest-wise. The casual observer might easily be misled to believe that our forests are on the wane because it is a common sight to see a stand of trees being chewed up to make way for urban development, superhighways, industrial sites, high-tension lines, and other uses. Perhaps it is the noisy bulldozers that bulldoze the misconception into our subconscious.

Of course there was a time when the lumbering boom and forest fires threatened to denude Pennsylvania of its forests. The low point of forest acreage was reached about the time of World War I. During the period of denudation, innumerable acres of forest land became crop and pasture land.

The war changed things. High wage-paying, war-related industries attracted many farm workers who never returned to farming. Once begun, the trend away from the farm was encouraged by the postwar prosperity of the 'twenties, the depression of the 'thirties, World War II, and the trend toward large-scale, highly mechanized farming with its ever-increasing capital requirements. Thousands of acres of marginal farm land reverted to forest land.

Unlike deforestation, which is usually rapid and raucous, reforestation is slow and silent. It goes something like the following. A hard-scrabble, hillside farm is finally abandoned. The first summer, weeds quickly take over. The next summer some grass gets a foothold under the weeds, and blackberry seedlings make their appearance. After several more years, clusters of trees push up above the brambles. The trees may be gray birch from wind-borne seeds, and Eastern red cedar trees from seeds dropped by birds that had dined on red cedar berries. Ulti-

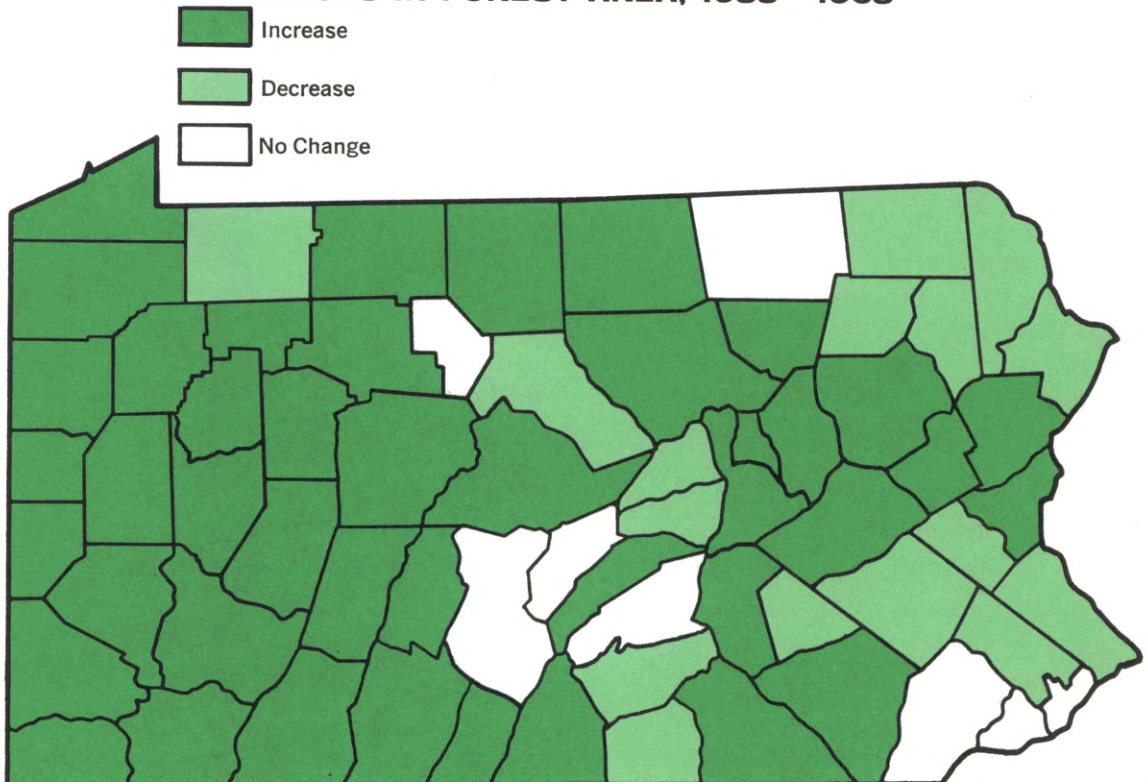
mately, maples and oaks crowd the birches and red cedars for sunlight. By and by the oaks and maples predominate. Thus, Pennsylvania cropland and treeless pasture reverted to forest at an annual rate of better than 150,000 acres during the measured decade.

Increases in forest acreage were most prevalent in counties in the western part of the state, as shown on the map, "Changes in Forest Area, 1955 to 1965." It was also in this region—the Allegheny Plateau and mountain area—that the increases were most pronounced, percentage-wise. Fully two-thirds of the Pennsylvania counties had increases. Losses occurred notably in the northeastern and southeastern counties. A scatter of six counties showed no change. Incidentally, Philadelphia and Delaware counties were scratched as too urban to produce commercial timber.

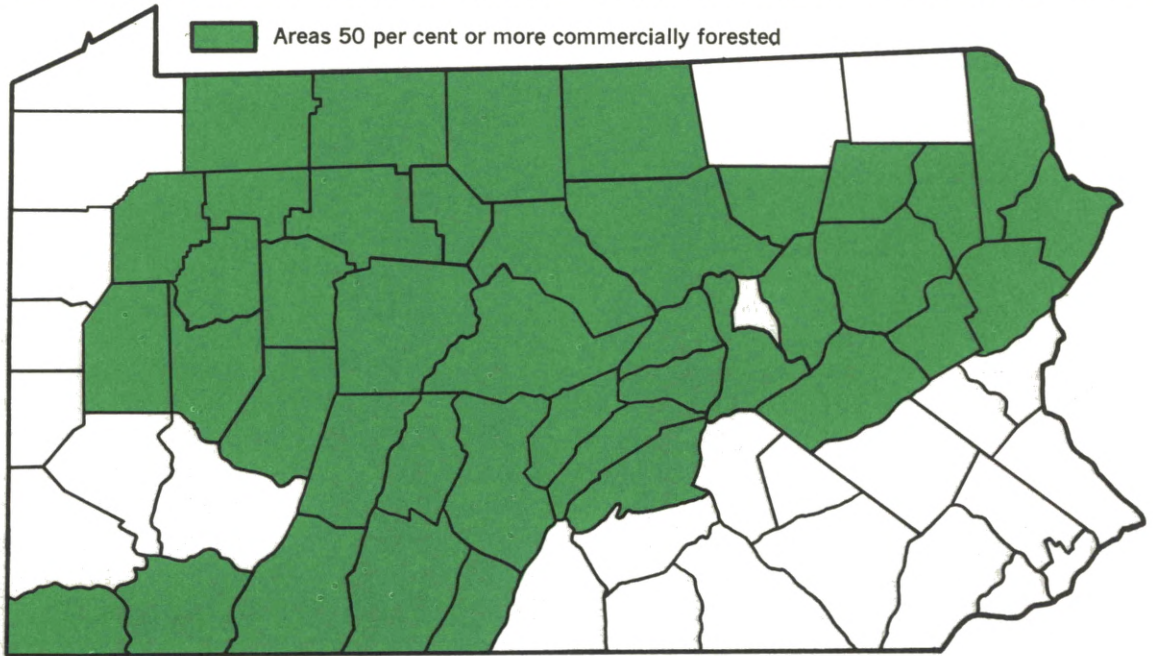
THE MOST FORESTED AREAS

Almost 60 per cent of Pennsylvania's land area is now forest-covered. In terms of counties, 41 of the state's 67 counties have forests covering half or more of their respective areas. Some sections of the state are just about as woody as they were when the Indians owned the place. Forest-covered counties to the extent of 90 per cent or more are Cameron, Elk, Forest, and McKean in the northwest. Moreover, the unshaded counties on the map are by no means treeless; half of them are forest-covered between a third and a half of their respective areas. Unused land, sooner or later, is taken over by trees. As might be expected, the most forest-forsaken counties are those swarming and teeming with people, such as Philadelphia and Delaware, and agricultural paradises such as Lancaster and York.

CHANGES IN FOREST AREA, 1955 — 1965



COUNTIES 50 PER CENT OR MORE COMMERCIALY FORESTED—1965



TREES IN THE FOREST

Pennsylvania is endowed with quite a variety of forest trees and large shrubs. About 125 species are native to the state but large numbers of these are found as dense undergrowth, often so thick as to prevent jogging through. The undergrowth, however, is not to be despised, for it tends to protect the soil from erosion, to conserve the fertility of the soil, and to afford shelter to birds which prey upon the insect enemies of the forest.

Of trees that tower over the underbrush—those five inches or more in diameter (breast high, as foresters measure standing timber)—there was a 30 per cent increase in volume between 1955 and 1965. About 25 species constitute the total stand of timber. The leading species and their relation to the total may be seen in the table.

VOLUME OF GROWING STOCK ON COMMERCIAL FOREST LAND, BY SPECIES—1965

(In millions of cubic feet)

Select white oaks	1,455.5	
Select red oaks	2,327.7	
Other red oaks	1,203.3	
Chestnut oak*	1,901.1	
Sugar Maple	1,238.6	
Soft maples	2,611.5	
Black cherry	1,453.5	
Other hardwoods	4,192.5	
Total hardwoods		16,383.7
White pine	542.9	
Hemlock	733.1	
Other softwoods	200.9	
Total softwoods		1,476.9
All species		17,860.6

*Includes 11.3 million cubic feet of other white oaks.
 Source: Roland H. Ferguson, "The Timber Resources of Pennsylvania," United States Forest Service Bulletin NE-8, 1968.

Things worth noting in the table are: that hardwoods (the broadleaf varieties) make up over 90 per cent of the stand; that oaks are by far the leading species, accounting for about 40 per cent of the total. Things worth noting in the forest are: that oaks predominate in almost every part of the state except for an irregular band along the northern border; that some individual species sometimes congregate in pure stands, but that mixed stands are more common.

Oaks are famous and have a worldwide reputation for their sturdiness, great strength, and the high commercial value of their wood. Most of them attain great age and are aggressive competitors in the ceaseless struggle for lebensraum in the forest. Economically, the genus rates with the highest. Oak wood is used for furniture, construction, interior finish of houses, and many other applications where strength and hardness are required.

Next in volumetric importance are the maples: they account for over a fifth of the growing stock. Maples make beautiful shade trees, and some species yield a sweet sap easily concentrated into maple syrup or sugar. Maple wood is fine-grained, dense and, in some species, the wood is hard and beautifully curled which makes it especially desirable for cabinet work and furniture.

Black cherry, which increased substantially in the decade between surveys, is the only other species with a stand in excess of a billion cubic feet. It is a valuable tree. The wood is hard and strong, and does not warp or split in seasoning. It is used in furniture and finish, high-class panels, and also for tools, implements, and patterns.

White pine and hemlock together account for almost 90 per cent of our softwoods (ever-

greens). White pine grows rapidly in a variety of soils, and pine wood is adaptable for practically all uses except where strength, hardness, and durability in contact with soil are required. White pine and other fast-growing evergreens are grown for the Christmas-tree market, to which Pennsylvania makes a substantial contribution.

Hemlocks grow slowly, mature gracefully, break easily. Their brittle, coarse-grained wood is confined to uses such as laths, weather-boarding of buildings, and paper pulp.

SAWTIMBER

Seedling to sapling to poletimber to sawtimber are the major stages in the life and times of a tree. Upon attaining a minimum diameter of five inches, a tree acquires commercial size of interest to pulp and paper manufacturers. Not until it attains a diameter of at least 10 inches is it regarded as sawtimber and begins to become an item of interest to the lumber people.

Pennsylvania forests increased 27 per cent in merchantable sawtimber during the decade under review. All species except birch, beech, and basswood contributed to the increase in which the family of oaks predominated.

Unfortunately, from a commercial point of view over half of the stand of sawtimber volume is in trees under 15 inches in diameter. These are still in the fast-growing stage, but what the lumber and veneer trades want are the really big trees—the 20- to 30-inchers, and they want them now.

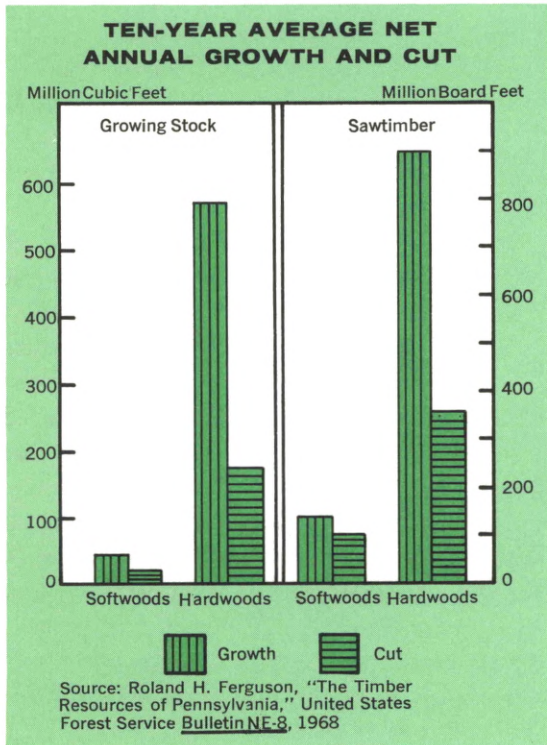
GROWTH EXCEEDS CUT

The average net annual growth of Pennsylvania trees was 615 million cubic feet from 1955 to 1965, while the average annual cut was only 204 million cubic feet. A three-to-one ratio of

growth to cut doesn't look like dipping into arboreal capital. But note: *average* growth versus *average* cut. Average is a blanket term that may offer specious warmth, in spots.

For example, softwood growing stock is being cut more heavily in relation to growth than hardwood—50 per cent of softwood growth versus about 30 per cent of hardwood growth as the chart shows.

Moreover, sawtimber suffers deeper cuts in relation to growth than total growing stock. The chart shows an annual cut of 439 million board feet of sawtimber out of an annual growth of about a billion board feet for a slightly better than a two-to-one ratio of growth over harvest. And the deepest cut of all occurred in softwood sawtimber where, as the chart shows, the cut was three-fourths of the growth. The comfort of the “average” shrinks as we go from the general to the specific.



THE TIMBER HARVEST

Lumber production in Pennsylvania reached a peak of more than two billion board feet a year around the turn of the century. Then a decline set in, which reached a bottom of about 200 million board feet in 1932—a year when almost everything in the American economy scraped bottom. In the decade between surveys, production rose from 495 million to 545 million board feet. That is not a gain worth proclaiming from the rooftops, but it is a gain within limits of a sustained yield basis instead of an after-us-the-deluge basis of bygone days.

The modest increase in lumber production during the decade was accompanied by a substantial growth in scale of operation. Big sawmills producing at least a million board feet per year increased from less than 100 to more than 150, while the total number of sawmills in operation declined from more than 2,000 to about half that number. Apparently, the so-called “peckerwood” mills—the small portable sawmills—encountered rough going.

The pulpwood harvest during the decade rose by 80 per cent—ever so much more than the increase in the lumber harvest. All but 15 per cent of the pulpwood consisted of hardwoods, in which oak and hickory predominated.

Pennsylvania's pulp output is the product of 12 mills. Three of the mills are in Blair County, two each in Elk and York, and one each in Erie, Clinton, Wyoming, Northumberland, and Philadelphia. Pulp is usually made directly into paper by integrated concerns that perform all of the processes from debarking the logs to last finishing operations of the paper ready for delivery by the roll or the ream.

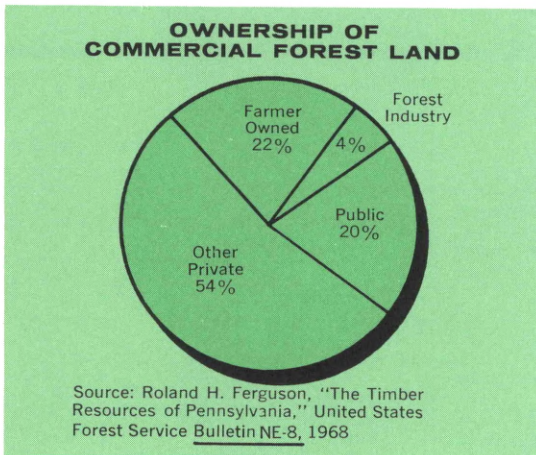
In terms of cubic footage, lumber accounts for 55 per cent of the total harvest, and pulpwood almost 30 per cent. The remainder consists of veneer logs, cooperage logs, mine

timbers, posts, miscellaneous industrial wood such as hewn ties and shingle bolts, and fuelwood.

PENN'S WOODS UNDERWOODED

Although Pennsylvania is woodsier than it was a generation ago, it is not so wooded as it could be or should be. To be sure, our forest acreage is expanding and the growth of timber exceeds the harvest. But both growth and cut are too small, as any recent buyer of lumber knows.

Despite the Commonwealth's vast acreage of forest land, too much of it is inadequately forested. Almost two million acres are populated too sparsely or with scrubby trees that have little chance of ever producing good lumber.



The reason for the gap between what our forests produce and what they could produce lies largely in their ownership and management. Forest-anchored industries such as lumber companies, and pulp and paper companies, strange as it may seem, own only 4 per cent of the commercial forest land. Farmers own 22 per cent, other private owners 54 per cent, and the remaining 20 per cent is publicly owned; that is, property of the federal, state, or local governments.

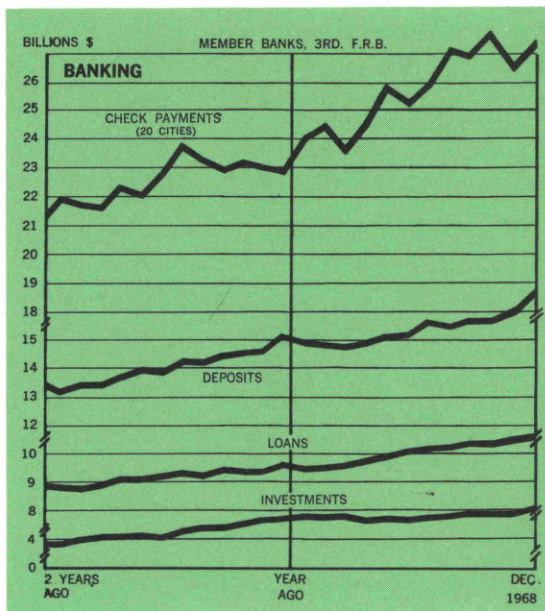
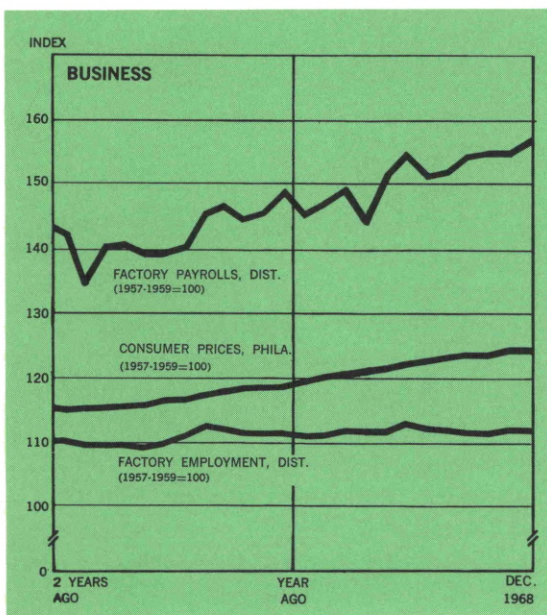
State and federal forests, under supervision of professional foresters, are well-managed so as to produce a maximum yield of desirable lumber, along with water, game, recreation, and natural beauty—the multiple-use concept. Forest-anchored industries, by reason of huge investments in forest land, practice selective cutting, reforestation, and related aspects of silviculture. Thus, only about a fourth of Penn's Woods receive tender loving care.

Where good management is most lacking is in the forests that are privately owned, and these account for three-fourths of the forest acreage in the state. Among the quarter-million private owners are numerous motives of ownership—aesthetic, recreational, speculative, or perhaps just the simple satisfaction of landlordship. Many of these people are averse to having any trees removed even if it does not interfere with their basic motives of ownership.

Of course private owners, as all other owners, benefit by the forest fire protection and fire prevention work conducted by the Pennsylvania Department of Forests and Waters. Fires over 100 acres are now rare owing largely to well-trained fire control personnel and mechanized equipment. Losses from insects and disease now exceed many times the losses by fire.

Professional advice and assistance on forest management are available from the Department of Forests and Waters to all private owners seeking aid. Unfortunately, the corps of professional foresters is too small. So overburdened are they with requests for aid and advice that some of them are over a year behind schedule. Unless there is a change in priorities among all the demands for Commonwealth funds, Penn's Woods will just have to grow as best they can. At least Pennsylvania is better off than a sister state whose chief executive remarked, "A tree's a tree. How many do you need to look at? See one, you've seen them all."

FOR THE RECORD...



SUMMARY	Third Federal Reserve District			United States			
	Per cent change			Per cent change			
	Dec. 1968 from		12 mos. 1968 from	Dec. 1968 from		12 mos. 1968 from	
	mo. ago	year ago	year ago	mo. ago	year ago	year ago	year ago
MANUFACTURING							
Production				- 2	+ 4	+ 5	
Electric power consumed	+ 2	+10	+ 9				
Man-hours, total*	0	- 1	0				
Employment, total	0	0	+ 1				
Wage income*	+ 1	+ 5	+ 6				
CONSTRUCTION**	-12	-10	+42	- 7	+11	+13	
COAL PRODUCTION	- 5	-10	- 4	- 3	+ 3	- 1	
BANKING							
(All member banks)							
Deposits	+ 6	+12	+10	+ 7	+12	+ 9	
Loans	+ 3	+13	+10	+ 3	+12	+ 9	
Investments	+ 3	+ 8	+13	+ 2	+10	+11	
U.S. Govt. securities	+ 2	- 2	+ 5	+ 3	+ 3	+ 5	
Other	+ 3	+17	+21	+ 2	+16	+17	
Check payments***	+ 3†	+21†	+14†	+ 2	+24	+20	
PRICES							
Wholesale	0	+ 3	+ 2	
Consumer	0‡	+ 5‡	+ 5‡	0	+ 5	+ 4	

LOCAL CHANGES	Manufacturing				Banking			
	Employment		Payrolls		Check Payments**		Total Deposits***	
	Per cent change Dec. 1968 from		Per cent change Dec. 1968 from		Per cent change Dec. 1968 from		Per cent change Dec. 1968 from	
	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago
Standard Metropolitan Statistical Areas*								
Wilmington ..	0	+ 1	- 1	+ 5	+29	+26	+13	+ 8
Atlantic City ..					+ 1	+ 3	+ 2	+11
Trenton	0	0	+ 1	+ 9	- 8	+18	+ 3	+ 8
Altoona	0	+ 2	+ 3	+14	+ 4	+15	+ 1	+14
Harrisburg ...	- 1	- 3	+ 1	+ 2	0	+14	+ 2	+13
Johnstown ..	+ 3	- 5	+ 3	0	-15	+10	+ 1	+11
Lancaster ...	0	0	0	+ 6	+ 7	+13	+ 1	+12
Lehigh Valley	0	+ 2	+ 3	+10	- 2	+17	+ 2	+11
Philadelphia .	0	- 2	+ 2	+ 4	0	+21	+ 9	+14
Reading	0	+ 2	0	+11	- 2	+37	0	-10
Scranton	0	- 1	0	+ 2	- 4	+16	+ 3	+ 9
Wilkes-Barre .	- 1	+ 3	- 1	+ 9	- 2	+11	+ 2	+ 9
York	- 2	+ 1	0	+ 9	+ 4	+ 8	+ 1	+ 8

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

†15 SMSA's
 ‡Philadelphia

*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.