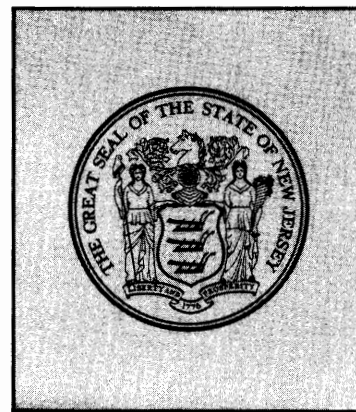
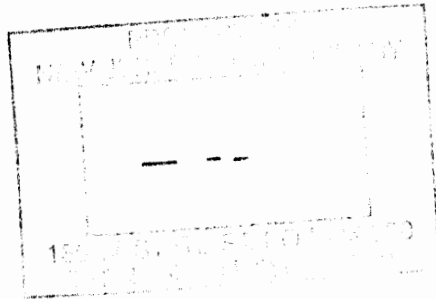


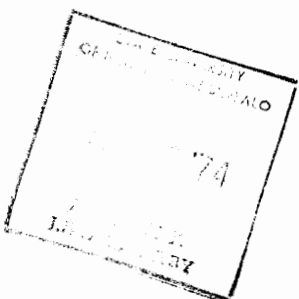
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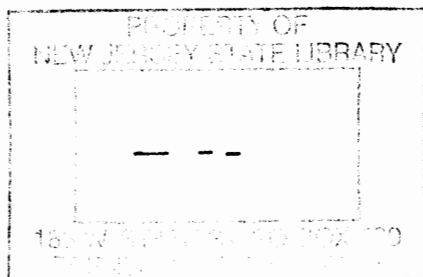


2nd Annual Report

Economic Policy Council
and Office of Economic Policy

Department of the Treasury
State of New Jersey
June, 1969





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ECONOMIC POLICY COUNCIL

DR. WILLIAM J. BAUMOL, *Chairman*
Professor of Economics, Princeton University

DR. MONROE BERKOWITZ, *Member*
Chairman, Department of Economics, Rutgers University

DR. WILLIAM C. FREUND, *Member*
Vice President and Economist, New York Stock Exchange

DR. HARRY STARK, *Secretary*
Assistant Dean, University Extension Division
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State of New Jersey
DEPARTMENT OF THE TREASURY
OFFICE OF ECONOMIC POLICY
STATE HOUSE
TRENTON, NEW JERSEY 08625

May 15, 1969

HONORABLE RICHARD J. HUGHES
Governor, State of New Jersey

DEAR GOVERNOR HUGHES:

The Economic Policy Council has the honor to transmit its Second Annual Report in accordance with Chapter 129 of the N. J. laws of 1966.

The report deals with a variety of economic issues of critical importance for the future of the State of New Jersey. It describes the results of some relevant academic research, it provides some important basic data on economic activity in the state which were previously unavailable, and it discusses such pressing issues as financial policy and problems of the cities.

The objectives of the Council, in this report as well as in all of its other work, have been to concentrate on matters directly relevant for public policy, and to maintain high standards in research and analysis. We hope to provide material which will be useful both to the executive and the legislative arms of the state—objectives which are consonant with the spirit of the legislation under which the Council was created.

The members of the Council have been involved, directly or indirectly, with every section of this report. They have written some portions of the report and they have helped to advise and encourage those who prepared the remainder of its contents.

We are grateful to the research and statistical staffs of the Departments of the Treasury, Agriculture, Community Affairs, Conservation and Economic Development, and Labor and Industry for the information and assistance they have provided. We would like to acknowledge also our debt to the various contributors. Above all we must thank Dr. Gerhard Bry, without whose labor and thought this report might not have been completed. Finally, we would like to express our gratitude to Dr. Harry Stark, who as secretary to the Council has constantly made available to us his very considerable judgment and organizational abilities.

The preparation and publication of this report was helped by the generosity of the Ford Foundation which provided a supporting grant through the Department of Community Affairs.

Respectfully submitted,

William J. Baumol
WILLIAM J. BAUMOL, *Chairman*

Monroe Berkowitz
MONROE BERKOWITZ
William C. Freund
WILLIAM C. FREUND

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I

ACTIVITIES OF THE NEW JERSEY ECONOMIC POLICY COUNCIL DURING 1968*

Introduction

DURING its second full year of operation the Council continued to organize its work along the two complementary lines which emerged during the initial year of its activity. First, the Council continued to meet with the Governor, the Treasurer, and other state officials for regular reviews of economic conditions in the state and the nation, and for discussion of the economic aspects of major policy issues confronting state government. Second, to support the Council's advisory function a program for the development and analysis of information relevant to economic policy issues was continued.

The Council members have been encouraged by the way in which the consultative function has matured and by the rapport which has developed with the Governor, his staff, and with principal officials in the departments of the Treasury, Conservation and Economic Development, Labor and Industry, and Community Affairs. Cooperation among these executive agencies has made possible the continuation, as a cooperative endeavor, of

* Prepared by Harry F. Stark, Secretary to the Economic Policy Council.

periodic economic reports as well as the provision of the basic data for various research programs.

The Council endeavored to follow the guiding principles enunciated in the *First Annual Report*: first, to maintain flexibility in its approach in order to accommodate a variety of relationships with governmental, academic, and community agencies; and second, to distinguish carefully between the economic analysis of policy issues and the political disposition of such matters.

The Council pursued the statutory mandate "to provide an annual economic report and integrated information identifying more fully and timely the character, performance, and potential of the economy. . . ."¹ It was also guided by Governor Richard J. Hughes' suggestion that the Council determine major research priorities and the means by which they can best be met and that they endeavor to involve New Jersey's promising young professionals in research and analytical assignments related to central economic issues before the state.²

The Council believes that the intent and purposes of the statute were effectively implemented during the second year of its activity, although severe resource limitations hampered both the implementation of earlier plans for staffing and cooperative study programs intended to be carried out with other government agencies and educational institutions. The effectiveness of the work so far accomplished will be jeopardized if only minimal resources continue to be provided and these only on an intermittent basis. The future work of the Council requires assurance of the resources needed to implement the statutory assignments.

The Law provides that the Governor shall designate the Chairman of the Council. In May 1968, following the publication of the *First Annual Report*, Dr. William J. Baumol was designated as Chairman, on the recommendation of the Council to the Governor.

Research Directions

During the year the Economic Policy Council responded, through informal memoranda and discussions, to policy questions raised by the Governor and his staff. Some of these resulted in brief study papers which are included in this report. Major discussions centered about the economic aspects of state revenue and finance, particularly the problem of finding a desirable balance between financing from current income and through long-

¹ Chapter 129 of the Laws of 1966 approved June 17, 1966.

² Statement by Governor Richard J. Hughes at the organization meeting of the Economic Policy Council, December 19, 1966.

term indebtedness. The relationship among local, state, and national fiscal problems was given attention, with particular emphasis on the stimulation of investment and entrepreneurship in New Jersey's older city centers.

The Council members continued their individual study interests and sought to relate academic pursuits to policy applications.

The Council Chairman, Dr. William Baumol, continued his work in the field of urban economics, concerning himself particularly with the economic viability of the cities and an experiment in income maintenance.

Council member Dr. Monroe Berkowitz pursued his interests in the economics of human resources, concentrating on vocational rehabilitation and social insurance. Dr. Berkowitz was appointed by the Governor to be chairman of the Employment Security Council which serves in an advisory capacity on matters relating to unemployment insurance and employment service activities.

Council member Dr. William Freund concentrated on the current analysis of state and national economic conditions and continued his interest in the economic impact of changes in defense spending on New Jersey. He was able to maintain his active participation in the work of the Council despite the demands of his new assignment as Vice President and Economist for the New York Stock Exchange.

Dr. Baumol and Dr. Berkowitz maintained the interest and involvement of their colleagues at Princeton and Rutgers in the activities of the Council and in the economic problems of the region, but resource limitations prevented the planned expansion of cooperative study efforts. The Council and the state benefited from these research efforts, and from the financial support derived from non-state sources such as the federal government, the Ford Foundation, and the Brookings Institution.

Current and Future Study Program

The initial series of public studies conducted at the Rutgers University Bureau of Economic Research has been substantially completed. An overview of this work is presented by Professor Berkowitz elsewhere in this report, together with study papers on revenue sharing and differential sales taxation by Dr. Peter Asch and Dr. Jeffrey Schaefer. The complete monograph on revenue sharing is being published separately by the Rutgers University Bureau of Economic Research.

Professor Wallace Oates of Princeton University contributed to this report papers on bond financing and local public finance. Preliminary studies

on the costs of higher education in New Jersey have also been undertaken at Princeton.

The first year of a contemplated three-year project, whose object is to describe and forecast employment, income, and other economic activities in New Jersey, has been completed by Dr. Gerhard Bry of New York University. Resource limitations have forced the Council to suspend the program and consequently to endorse Dr. Bry's proposal (which appears later in this report) that the basic tasks of monitoring and analyzing the development of the New Jersey economy be continued by the appropriate executive departments of state government.

Professors Frank Davis and Robert Browne of Fairleigh Dickinson University are continuing their studies of Negro entrepreneurship, under the Council's auspices, but their work is not yet at the report stage. Once again, resource limitations prevented the Council from encouraging other similar research contributions directed toward New Jersey economic problems.

The preparation of an improved, consolidated, monthly economic report is in progress through cooperative efforts of the Departments of the Treasury, Labor and Industry, and Conservation and Economic Development. This work is being directed by Dr. Arthur O'Neal, of the Department of Labor and Industry, and a staff committee of economists and statisticians from the several interested executive departments. The intention is to publish an improved monthly economic report sometime during the coming fiscal year. The proposed document would incorporate the monthly New Jersey Economic Indicators, the monthly report to the Cabinet Economic Committee, and the bi-monthly New Jersey Economic Review. The new document would provide current general economic information in a single source while enabling the contributing departments to concentrate on studies and publications related to their specific spheres of activity.

Future study plans encompass such areas as the economics of education, transportation, and urban development. Current monitoring and basic analysis of the several industrial sectors of the New Jersey economy must be provided, whether within executive departments or by contract with external agencies. The advent of collective negotiations by public employees makes more urgent the collection and analysis of data on the economic structure of public employment, as an aid to policy determination by both the Executive and the Legislature.

Administration

The accomplishment of even the most modest future objectives will require the employment in the Office of Economic Policy of at least one professional staff economist who can serve as a resource for the activities of the Council and communicate effectively with his counterparts in the Departments of Labor and Industry, and Conservation and Economic Development.

Due to problems of budgeting and staffing, the Office of Economic Policy has been unable to fulfill the statutory purpose for which it was established, that is, to provide staff support for the Governor and the Council and to provide for both officials and the public comprehensive information about the economy of the state and the region. While the Office was to synthesize economic intelligence, it was not the intent of the Legislature to replace or integrate the programs for statistical information and research which the various executive departments of state government conduct for purposes pertinent to their functions.

The statutory task of assisting "the Governor and the executive departments with the establishment of statistical standards and procedures" was carried forward on a minimal basis through a steering committee and the Statistical Standardization Contact Committee which includes representatives of the several departments and agencies of state government and state-related organizations with a direct involvement in data standardization.

On June 11, 1968, at a general meeting of the entire standardization committee, the problems of standardization were discussed and a report on comparable activities in New York was presented by Mr. Herbert Alfasso, then director of the New York State Office of Statistical Coordination in the New York State Budget Division.

One significant advance was the publication of the first standardization manual providing a standard code for the identification of municipalities in electronically processed statistics. The procedures which have tentatively been established for the identification of standardized information and definition needs may well be a foundation for substantial progress in the future. Although this work of statistical standardization has not been a central concern of the Council members themselves, it is an inter-departmental management function to which the Treasury Department attaches great importance.

By arrangement with the Division of Budget and Accounting, direction in the current fiscal year for the work of statistical standardization has been

Evidence is accumulating that even if the amount of services demanded were not to increase, our state and local governments would be facing financial problems. Government is a labor intensive enterprise. Because of our lack of knowledge, or lack of ingenuity, we have been unable to substitute capital equipment for labor in so many areas of municipal and state services. Police, sanitation and fire departments, schools, all require increasing numbers of men to carry on essential services. Costs rise steadily. As Wallace E. Oates points out in another section of this report, local governments' spending in New Jersey has been rising at an annual compound rate of about 7.5 percent. This apparently is less than the average for the nation as a whole where the comparable rate of expansion has been 9 percent.

Citizens lament these increases in costs, but to no avail. The factors which push labor costs up in the economy as a whole (and which result in increased money incomes for all of us) are the same forces which move costs up for the services provided by the state and local governments. In other sectors of the economy, we are able to counteract some of these increases in costs by increasing productivity. However, cost-saving processes are more difficult to apply to the services of state and local government. Where technological change plays a role, as in the case of hospitals and schools, it is oft-times cost-increasing. More sophisticated equipment may improve the quality of care or learning but it may also result in increased costs of services rather than in cost reduction.

Municipalities rely principally on the property tax to finance expenditures. Unfortunately this tax does not respond quickly to changes in economic conditions. Costs of education increase drastically each year as teachers' salaries and other costs increase, but revenues from the property tax show no comparably dramatic rise.

To complicate the picture, municipalities differ greatly in the assessed evaluation of their properties. Some are favored with large blocks of industrial property which afford a sizable tax base without requiring expensive municipal services. Such municipalities can provide better educational facilities and can attract residents in the middle and high income levels who aspire to a quality education for their children. In turn, this may leave the central cities with fewer and fewer taxpayers who are able to support essential services. Consequently, we see a migration of middle-income families to the suburbs which weakens the pressures on the cities to provide high quality services and helps eliminate the wherewithal to finance them.

But with more lower-income families in the central cities, the demand for certain municipal services increases. Welfare costs, which may be further

boosted because of migration of persons from other areas, fall heavily on the cities and compel them to increase their property taxes. This only serves to accelerate the migration of middle class families to the surrounding suburbs. All this is a bleak and familiar account of a process which is occurring all around us and upon which the citizens of the state cannot look with equanimity. Many active programs have been undertaken, and more needs to be done so that we may begin to solve the essential problems that face the state.

Rehabilitation of the cities requires the cooperative effort of all levels of government. Persons now in the cities must be trained to improve their productivity so they may secure places for themselves in the job market. Ghetto enterprises must be encouraged so that present ghetto residents can push open this path towards social mobility. Above all else, state and local governments must be placed on a sound fiscal basis so that the necessary programs can be undertaken and deterioration in existing facilities arrested. We will not be able to rely so heavily on property tax for revenue, and some form of revenue-sharing among levels of government will be necessary. It will also be necessary for the state to finance its long-term needs through increased use of bonding in a system of capital planning and budgeting.

Before discussing bonding and capital planning in detail, we must examine the proposed use of public authorities and the use of earmarked state funds as means to promote desirable social enterprises.

Use of Dedicated State Funds to Promote Social Enterprises

When housing deteriorates in the ghetto areas, and when needed social services are not provided, it seems natural to ask why the state does not invest its available funds in socially desirable programs. If the state does have monies in pension and trust accounts, why not use these funds where they can be socially useful?

There can be no question that resources must be committed to the improvement of life in the slums of the city. These resources, however, should come, directly or indirectly, from the general tax revenues of the state rather than from pension and trust accounts.

While the problem is a complicated one, its essence can be presented simply. The investment of state pension funds at less than the going market rate of interest will result inevitably in lost earnings opportunities. The fund could be earning more if its assets were invested elsewhere. It is true that general tax revenues might be appropriated to make up the difference, but this would be just a round-about way of using tax revenues to subsidize interest payments on borrowed funds.

State trust accounts, such as pension funds of state employees, should be invested where they can earn the highest yields consistent with the risk objectives of the account. Unless there is some specific reason for employees of the state to subsidize a particular project, it would seem unwise to use dedicated funds for broad social purposes. Philanthropic foundations might well invest their funds in socially desirable enterprises: here the investment objectives become secondary and the desired social objectives primary. States, on the other hand, cannot solve their financing problems by using funds in trust accounts. They must find other ways to finance desired social objectives.

Use of Public Authorities

As demands are made on the state to support more and more projects, it becomes increasingly difficult to finance them—particularly if there are statutory ceilings on bonded indebtedness. This provokes the question why one should not set up, outside the regular structure of government, some independent financial authority which would issue revenue bonds and amortize them by the collection of user charges.

This device is widely used in the United States. It is estimated that there are over 18,000 special districts or public authorities in this country. Pennsylvania's authorities have been especially active at the municipal level, largely because of the restrictive debt limitations imposed upon localities. In New Jersey, local authorities are common in connection with sewerage, parking, and recreation. Wisconsin and Illinois have been prominent in the establishment of authorities at the state level. New York has a State University Building Authority which finances activities by sale of revenue bonds through the New York State Housing and Finance Agency.

The setting up of authorities, however, is a fairly expensive way to raise revenues. Revenue bonds issued by authorities command higher yields than general obligation bonds of governments. In view of differences in terms, direct comparisons between costs of bonds are difficult; but it is not unrealistic to estimate the interest cost of authority bonds to be at least one percent higher than the market rate. The picture is further complicated since state governments may guarantee authority obligations fully, partially, or not at all. Pennsylvania Turnpike Authority bonds, for instance, are supported solely by toll revenues. New Jersey Turnpike Authority bonds are not backed at all by the State of New Jersey, but initial financing was aided by state funds. New Jersey Highway Authority bonds are backed completely by the state and this backing has survived constitutional challenge. The New York Thruway Authority has state backing for a portion of its bond issues, but not for issues in excess of a stipulated amount.

There are also social costs to the use of public authorities as means of long-term financing. Grants of monopoly power to state authorities may prevent private enterprise from competing. Because of obligations to bond holders, public authorities may perpetuate their function long beyond the time of usefulness. The independence of these authorities may appeal to governments which seek expeditious ways of solving problems without getting involved, but this independence may exist only as long as things go well. In time of difficulty, the public officials cannot be indifferent to the fate of the authorities and may be required to ransom them at extra expense to government.

We do not deny that public authorities have a role to play in state finances. When funds are needed for some function not usually performed by government, when emergency situations arise that cannot be met by increases in state revenues or increases in the state's long-term indebtedness, and when user charges are a desirable way to pay for a given project—in such instances the establishment of public authorities is one method of accomplishing the desired objective. However, we feel obligated to advise caution regarding the indiscriminate use of these authorities at the state and local level. If they are to be used, there is some virtue in centralizing their activities and in providing some measure of governmental control.

Bond Financing and Capital Planning

Any misgivings about the profligate use of public authorities does not extend to the fundamental notion of bond financing. There are several economic reasons why financing of capital projects by the issuance of bonds is desirable. By their very definition, capital projects are long-term projects and one expects that benefits from them will be derived over a long period of time. Thus, it seems wise to spread their costs over a long period of time. Citizens who will benefit by these projects in the future should presumably also pay for them in the future.

It makes little sense to delay a particular capital project, if it is desirable in and of itself, because of inadequate current tax revenues. In any case, a project which has a long useful life should be paid for over its entire period of use. The data presented by Wallace Oates in this report indicate that the New Jersey State Government has used bond financing to a much lesser extent than either its neighbors or the average state in this country.¹ The state's unwillingness to make adequate use of this economically sound method of financing long-term capital projects undoubtedly has meant that we have foregone many socially useful investments.

¹ "The Theory and Practice of Bond Finance," Wallace E. Oates.

In short, we believe that it makes good economic sense to finance capital projects by long-term bonds and that the State of New Jersey should make fuller use of this type of financing.

Planning for capital needs and the appropriate form of finance would be greatly enhanced if the state adopted a capital budget which would span some longer period than the normal operating-budget time. The increasingly complex responsibilities of the state government call for strong, well staffed, strategically located planning services. New Jersey has made good progress in planning and has developed several projects to guide the state in future years. To complement these plans the state should have a capital-budgeting office which would be responsible for the financing of the short-range capital budget and for long-range financial planning.

Revenue Sharing

The analysis of much of this report points to the conclusion that the financial demands on the state will increase in the future. Fundamental changes in its taxing system may be necessary, but there are limits to the revenues that can be raised by state taxes. We are faced with the fact that the most productive tax, the one that is most responsive to changing economic conditions, is largely the domain of the federal government. At least one partial solution to New Jersey's fiscal problem may lie in the area of revenue-sharing.

We look forward confidently to the eventual cessation of hostilities abroad and the beneficial effects this will have on the federal budget. We expect that, given the elasticities of the federal income tax, revenues will increase more rapidly than the size of the economy and that surpluses will result. When it is recognized that state and local governments are in trouble fiscally, a sharing of these surpluses of the federal government would be appropriate and appealing. There are many possible plans for the sharing of federal revenues and some of these are discussed by Peter Asch in his paper "Revenue Sharing: Some Implications for New Jersey" which appears in this section of this report.

Proposed methods of sharing these revenues range from expansion of the present federal grants-in-aid programs to federal tax credits. As alternatives, federal tax cuts and various forms of federal income maintenance programs have been discussed. Although these latter programs would not provide states with greater revenues, they would certainly reduce expenditure loads. Regardless, however, of the particular formula adopted, any form of federal assistance would improve the fiscal conditions of the state and locality.

New Jersey is a comparatively wealthy state and thus contributes a generous share to federal income tax receipts. It thus may be thought it should advocate a sharing formula which does not seek to redistribute income. However, we must recognize that at least a portion of New Jersey's fiscal problems are caused by migration from other states. Hence, even from a more parochial point of view, it is true that some of New Jersey's problems would be alleviated if better state services were provided elsewhere.

New Jersey, of course, cannot afford to sit idly by until an appropriate federal tax-sharing plan is adopted. Apart from participating in the development of such a plan and safeguarding socially desirable features, it must put its own fiscal house in order. This requires a careful examination of the state's own fiscal structure, a determination of the appropriate role and scope of several types of possible taxes, and the development of an adequate borrowing program for meeting New Jersey's long-term capital needs.

A COMPARATIVE STUDY OF RETAIL SALES TAXATION*

Summary

MUCH of the opposition to retail sales taxation stems from its alleged regressivity. The belief that a sales tax must be regressive is based on data showing the ratio of consumption to income decreasing as income increases. Proponents of sales taxation often contest the regressivity argument by indicating that with a judicious use of exemptions in the tax law, a sales levy can be non-regressive. If these proponents are correct, legislators may find the desirability of sales taxes increasing relative to other more regressive levies. The preliminary findings in this study support the view that a retail sales tax can essentially be non-regressive if certain exemptions are provided for, such as expenditures on food for home consumption and on housing. On the other hand, general clothing exemptions fail to reduce sales tax regressivity and simply leave states with fewer tax revenues.

* Prepared by Jeffrey M. Schaefer, Department of Economics, Rutgers University.

Introduction

There are now 44 states with sales taxes applying primarily to sales at retail of tangible personal property. Significant differences exist in the coverage of sales levies employed by these states. In addition to dissimilarities in the tax treatment of retail transactions for business purposes,¹ important discrepancies exist with regard to the tax status of consumer expenditures on the following items: food prepared at home, clothing, utilities, spectator admissions, cigarettes, and alcoholic beverages. Of the 44 states with sales levies as of January 1, 1968, 14 exempted food for off-premise consumption, six had a complete or partial clothing exemption, 16 exempted gas and electricity expenses, 28 failed to assess water payments, 18 excluded telephone and telegraph outlays, spectator admissions, and cigarettes, and 13 treated expenditures on alcoholic beverages as nontaxable.

Objections to and Support of Exemptions

When the sales tax does not apply to total consumption, the tax burden is distributed in relation to taxable consumption rather than according to total consumption, assuming, of course, that the levy is shifted entirely onto the consumer. This distribution is the butt of a major objection to sales tax exemptions—discrimination against those individuals having relatively high preferences for taxed items and low preferences for exempt commodities. Indeed, if exemptions become too widespread, the so-called sales levy resembles a series of special excise taxes with the associated discrimination among persons similar in ability to pay. Such discrimination is contrary to the principle of equal treatment of equals.

Besides violating accepted standards of equity, exemptions may bring about other undesirable circumstances, *i.e.*, demand may be distorted away from taxed to exempt commodities. This, in turn, could alter factor incomes, with the income of factors specialized in producing taxed items decreasing while the income of factors producing exempt items increases. Such a redistribution of income is probably not the intent of those imposing the sales levy. Moreover, exemptions, particularly where important components of the family budget are involved, necessitate a higher tax rate to raise a given

¹ Although in principle retail sales taxes are supposed to be assessed against consumers at the point of final purchase, in actuality state sales taxes are also levied against purchases for business purposes. Most sales-tax states employ the so-called component-part ruling in determining whether business purchases are subject to sales taxation. In such states, inputs in the production process which do not become an actual ingredient of the final product are taxable. Sales of tools, machines, office equipment, cash registers, etc., have all been classified as taxable under the component-part ruling. Other states such as New Jersey follow the direct-use ruling in that besides excluding from sales taxation inputs which become an actual ingredient of the final product, they also exclude certain inputs, such as machinery, apparatus, or equipment used in the production of tangible personal property.

amount of revenue, thus adding to the incentive given to evasion and intensifying compliance problems.

The preceding discussion suggests several detrimental consequences which could arise because of exemptions from the sales tax base. Nevertheless, many state legislatures have permitted exemptions on the grounds that they result in redistribution of the tax burden in line with prevailing social standards of equity regarding low income groups and large families. These improvements are thought to justify any pernicious consequences on horizontal equity and other drawbacks resulting from exemptions.

Purpose of the Study

The primary purpose of this study is to compare the regressivity or progressivity of different sales tax bases in various states; and in particular, to compare the equity rating of New Jersey's sales tax with other states. The equity rating of a sales tax will be evaluated in terms of how regressive or progressive the levy is. If tax liability increases at a slower rate than income, the tax is regressive and has a low equity rating. If tax payments increase at a faster pace than income, the tax is progressive and has a high equity rating. With the use of statistical techniques, comparisons can be made between the sales tax payments of families with different amounts of disposable income while standardizing for variations in family size and race between these families.

The states chosen for comparison are: California, Connecticut, Georgia, Illinois, Ohio, Tennessee, and Texas. The pertinent information is given in Table 1. First, we assume that the eight states all have identical sales tax bases (Sales Tax 1, row 1).² Differences in the regressivity of a tax levied on this same base between the states may be explained partly by relative income, price, and taste differences. We then drop this assumption and investigate the actual sales tax base in each of the eight states (Sales Tax 2, row 2). Differences in the results for Sales Taxes 1 and 2 provide some indication about the states' distribution of the sales tax burden in line with prevailing social standards of equity regarding low income groups. Finally, we can judge whether the most frequent and important exemptions from sales taxes are indeed justified by equity arguments (Sales Tax 3—Sales Tax 5, rows 3, 5, and 8).

Utilizing the Bureau of Labor Statistics' tabulation of Consumer Expenditures and Income for the urban United States in 1960-61, the following

² The tax base was chosen to represent as closely as possible the average retail sales tax structure of the 44 sales-tax states. The data needed to construct such a base were provided for the most part by Daniel C. Morgan, Jr. See his *Retail Sales Tax*, (The University of Wisconsin Press, 1964, pp. 143-45, 148-52).

Table 1
ESTIMATES OF SALES TAX PROGRESSIVITY FOR EIGHT STATES

	California	Connecticut	Georgia	Illinois	Ohio	Tennessee	Texas	New Jersey
Cities in the Sample	Bakersfield, Los Angeles- Long Beach, San Francisco- Oakland	Hartford	Atlanta	Champagne- Urbana, Chicago	Cleveland, Dayton	Nashville	Austin, Dallas	Northern New Jersey
Number of observations	810	175	198	497	472	226	220	356
Sales Tax 1								
1) (Average sales-tax structure in sales-tax states) .....	.61	.71	.82	.68	.68	.77	.47	.83
Sales Tax 2								
2) (Existing sales-tax base) .....	.80	1.15	.80	.71	1.02	.82	.76	1.30
Sales Tax 3								
3) (ST_2 — food consumed at home)			.92	1.01		1.09		
4) Income elasticity of expenditures on food consumed at home .....	.25	.33	.68	.29	.31	.21	.08	.47
Sales Tax 4								
5) (ST_2 — all expenditures on clothing) .....	.68	1.15	.76	.66	1.02	.74	.74	
6) Income elasticity of expenditures on clothing .....	.81	1.28	1.38	1.14	1.17	1.61	.96	1.50
7) Income elasticity of expenditures on children's clothing .....	.16	.26	.46	.16	.32	.42	.26	.25
Sales Tax 5								
8) (ST_2 + housing expenditures) ...	.57	.67	.68	.57	.69	.71	.52	.77
9) Income elasticity of housing expenditures .....	.21	.17	.41	.29	.33	.50	.25	.41

regression equation has been employed to measure the degree of regressivity or progressivity of alternative sales tax bases:³

$$(1) \log ST_i = a + b_0 \log Y + b_1 \log S_1 + b_2 \log S_2 + b_3 \log S_3 + b_4 \log S_4 + b_5 \log S_5 + b_6 \log R$$

where

ST_i = the i th sales tax base;

a = the constant;

Y = disposable income;

S_1 = 10 if one member family, 1 otherwise

S_2 = 10 if two member family, 1 otherwise

S_3 = 10 if four member family, 1 otherwise

S_4 = 10 if five member family, 1 otherwise

S_5 = 10 if six or more member family, 1 otherwise

R = 10 if nonwhite, 1 if white

b_0 = the responsiveness of expenditures on taxed goods with respect to income or more simply the progressivity index;

b_1 to b_5 = net regression coefficients for the various family size groups

b_6 = net regression coefficient for the race variable.

The preliminary results of this study are presented below.

Preliminary Results

As shown in Table 1, if all eight states utilized the same average 44-state tax base (Sales Tax 1, row 1), the regressivity⁴ estimates range from a low of .47 for Texas to a high of .83 for New Jersey.⁵ Since Sales Tax 1 reflects the average sales tax structure found in most of our states, the estimates suggest that sales taxation in the United States tends to be regressive.⁶

Progressivity indexes based on the actual sales tax bases in the selected eight states indicate that California, Connecticut, Ohio, Texas, and New

³ Two alternative specifications were also employed to estimate the impact disposable income has on taxable spending. In the first, a simple linear model was assumed to describe the relationship between disposable income and expenditures subject to sales taxation. In the second, income was entered as a set of dummy variables similar to the manner with which family size was handled in equation (1). Both of these alternatives explained less of the variation in the dependent variable relative to the specification used in equation (1).

⁴ In this study, a regressive tax is one for which the average tax rate decreases as income increases. For small changes in income, b_0 may be expressed as $\frac{a \log t}{a \log y}$. If $\frac{a \log t}{a \log y} < 1$, the percentage change in tax payments is less than the percentage change in income; hence, the average rate decreases as income increases and the tax is regressive.

⁵ In these and all subsequent calculations, it was assumed that consumer purchases were not distorted by relative price changes of less than 5 percent.

⁶ Provided one accepts current disposable income as a measure of ability to pay.

Jersey have done much to lessen the regressivity, or increase the progressivity, of their sales taxes. These five states exempt food purchases from the sales tax, whereas Georgia, Illinois, and Tennessee do not.⁷ If the latter three states were to exempt food, they would effectively increase the progressivity of their sales taxes (see Row 3). Food exemptions have a large impact on overall sales tax progressivity because of the relatively low income elasticity for food purchases (Row 4) along with the importance of food expenditures relative to total taxable spending.

Six states now have general or partial clothing exemptions, but more critically, three states who have recently adopted a retail sales tax—Massachusetts (1966), New Jersey (1966), and Minnesota (1967)—have exempted clothing purchases completely from the tax base. The results reported in Table 1 fail to support the case for general clothing exemptions in all eight states. Expenditures on clothing are estimated as being more responsive to income changes than expenditures constituting the present sales tax base. However, purchases of children's clothing (under 16) are much less elastic than those of all clothing. Partial clothing exemptions, i.e., children's clothing, may indeed be supported via an equity argument, but justification is apparently lacking for general clothing exemptions.⁸

The above discussion does not imply that all expenditures on adult clothing respond in the same way to income changes. For example, expenditures on items such as fur coats would appear more responsive to income changes than spending on undergarments. Instead of having a general clothing exemption, it would be more equitable to confine the exemption to those items of clothing whose consumption remains more or less unresponsive to income changes. Furthermore, it is possible that the responsiveness or elasticity of clothing expenditures varies considerably over the income distribution. This would mean that an exemption may be justified over one portion of the income distribution but not over another range of the distribution. It is extremely difficult for tax policy to come to grips with this problem. The final version of the study will contain estimates revealing whether the income elasticity of clothing expenditures changes significantly over the income distribution.

No state today extends the sales tax to rental payments. The reluctance to assess such payments stems from a concern for treating renters fairly vis-a-vis homeowners. Home ownership is already treated favorably under federal income tax regulations; a sales tax applying only to rental payments would

⁷ Of the 44 sales-tax states, 14 have food exemptions.

⁸ It appears that only Connecticut is proceeding correctly in exempting children's clothing solely. Massachusetts, Minnesota, New Jersey, Pennsylvania, and Wisconsin all have more or less general clothing exemptions.

accentuate the tax favoritism afforded homeowners. Only by applying the levy to the imputed income of homeowners could a sales tax on housing expenditures deal equitably with tenants and homeowners.

The BLS tabulation supplied information on both the annual rental payments of a renter and the gross value of a homeowner's house. Imputed income of homeowners was derived by taking five percent of this value. On the basis of these imputed incomes, estimates of the elasticity of housing expenditures with respect to current income turn out to be lower than that of the existing sales tax bases in all eight states; hence, including such payments in the base will further regressivity.

Conclusion

The tentative results of this study suggest that a tax exempting food for home consumption or housing expenditures reduces sales tax regressivity whereas the opposite conclusion applies to a general clothing exemption. However, partial clothing exemptions such as those employed in Connecticut on children's clothing may indeed increase sales tax progressivity. Further work is being carried out on the effects of public utility, alcoholic beverage, and cigarette exemptions. The results of this work will be contained in the complete report of the study.

THE THEORY AND PRACTICE OF BOND FINANCE*

THE governments of several states in this country have relied heavily on bond financing to raise funds for major construction programs. The principles of public finance suggest that in fact this use of bond issues for capital projects represents sound fiscal practice. The evidence indicates, moreover, that those states which employ bond finance to a significant extent tend to provide more capital facilities for their residents. New Jersey, in contrast, is among those states which have placed little reliance on bond finance, and we find that it has one of the lowest rates of public capital formation. Before examining this fiscal experience in more detail, it will prove useful to consider briefly the theory of bond finance; this will provide the background for a study of the actual use of bond issues by various states and in particular by New Jersey.

* Prepared by Wallace E. Oates, Department of Economics, Princeton University.

Bond Finance in Principle

The theory of public finance suggests that state and local governments should employ issues of bonds for one basic purpose: to finance capital projects. Capital projects are by definition long-term investment programs, programs whose benefits will be spread over years to come. New water reservoirs or an expanded highway system, for example, can be expected to provide a stream of services extending several decades into the future. This means that not only present residents of a state or locality, but also future residents will consume the services provided by the project. In this case, it is only fair that future, as well as present, residents be asked to share the costs of the program. The time-honored “benefit principle of taxation” says that those who benefit from public programs should pay for them in accordance with benefits received. From this viewpoint, bond finance has real appeal, for it offers a means through which payments for capital projects can be spread over the life of the structure so as to coincide more closely with the stream of future benefits. A state or local government can borrow the funds to finance the construction of the project and can then repay principal plus interest in a series of payments in future years.

There is, in this connection, a fundamental asymmetry between bond finance by the federal government and bond finance by state or local governments. Since the bonds issued by the federal government are held primarily by residents of the country, it is true that “We owe the debt to ourselves.” The debt of the federal government is therefore an **internal** debt; the issuance of bonds does not in itself imply a shifting of the burden of the debt to later generations. Future residents of the country will admittedly pay back the principal and interest, but they will also receive the payments. In contrast, the debt issues of state and local government are typically held in the main by “outsiders,” by residents of other states or localities. In this case then, one cannot argue so strongly that “We owe it to ourselves.” State and local debt is largely an **external** debt and as such will require at a future date a transfer of income from residents of the state to outsiders. This implies that the use of bond finance by a state or locality, in contrast to the national debt, does place a real burden on future residents: they will have to repay the loan but, in the main, will not be the recipients or beneficiaries of the repayments.

This, however, is just what is desired for the finance of capital projects. As discussed above, to distribute the costs of capital programs equitably among present and future residents of a state, we want to create an external debt in order to place some of the real burden of financing the program on future residents who will also realize many of the benefits flowing from the program. By virtue of its external character, bond finance at the state and

local level can thus provide a fair allocation of the costs of capital projects among those who will share the benefits of the programs.

There is, moreover, a second and perhaps even more compelling reason for a substantial reliance on bond finance for capital programs: for many worthwhile projects, bond issues are frequently the only practical way to acquire the necessary funds. Capital programs, such as the construction of roads or universities, typically involve very high costs which must be met over a relatively short time span. For this reason, it is generally very difficult to finance these programs out of current revenues. This problem, incidentally, is by no means peculiar to the public sector. Private corporations are continually making decisions on long-term investment projects, and these corporations, given the prospect of an attractive return from a potential investment program, generally display little reluctance to enter the capital markets with the issuance of their own bonds. Even at the level of the family, we find that long-term investments such as the purchase of a house normally involve the issuance of a mortgage. The point is that, for major expenditures on capital projects, current revenues are frequently insufficient; where the project is genuinely worthwhile, this should not, however, deter its undertaking. Bond finance is, in this instance, sound finance.

This line of reasoning applies equally well to capital projects in the public sector. Where prospective capital programs are clearly in the public interest (*i.e.*, where they promise a stream of future benefits whose value exceeds the cost of the project), they should not be pushed aside because of the inadequacy of current tax revenues. Rather than deprive both the present and future residents of a state of a stream of valuable public services, the government should feel quite justified in turning to bond finance. To do otherwise would represent fiscal irresponsibility in the true sense.

Bond finance at the state and local level should, however, be limited in general to the funding of capital programs.¹ To issue bonds to finance current expenditures would clearly run counter to the arguments presented earlier, for this would imply that future residents would have to pay for currently provided and consumed services. While it makes sense to require future residents of a state or locality to share the costs of programs of which they are direct beneficiaries, it is difficult to justify saddling them with liabilities to cover the costs of current services. One might be able to make a case for some short-term bond financing in the event of real fiscal emergencies,

¹ We typically think of "capital" programs as those involving brick-and-mortar type construction projects. More generally, however, what is meant is a program whose benefits will be spread over several years in the future. In these terms, a program to upgrade the skills of individuals or to eliminate the sources of racial discrimination and strife are properly interpreted as capital programs.

but as a rule bond finance at the state-local level should be reserved solely for raising funds for capital projects. It is interesting in this regard that some counties and a few states have adopted "capital budgets." This procedure involves the separation of the budget into two parts: a capital budget which lists new investment projects to be undertaken and a current budget which enumerates operating and maintenance expenditures plus funds to service and retire outstanding debt. In recognition of the principles discussed in this section of the study, the fiscal operation then usually consists of bond issues to finance the capital budget and tax levies to fund current spending.

The principles of public finance thus indicate that for state and local governments the issuing of bonds is the proper method to finance capital programs. Bond finance provides an effective means for allocating the costs of these programs among the beneficiaries in an equitable way and, as a practical matter, is often the only way to raise funds for many essential programs. For these reasons, it makes good sense that bond finance for capital programs be a regular part of state-local fiscal operations.

Bond Finance in Practice

Turning next to the actual funding patterns of the states, we find that the reliance on bond finance by both state and local governments has increased markedly in this century, especially in the period following the close of World War II. As Table 1 indicates, the total outstanding debt of state and local governments has grown more than seven-fold over the years 1946-67, a rate of increase well in excess of even the rapid expansion in state and local expenditures.

The great bulk of this outstanding debt (about 95 percent in 1967) consists of long-term bonds issued to finance capital programs, largely highways and school construction. It is interesting, moreover, that state and local governments have chosen increasingly in recent years to issue "serial" bonds, bonds which require each year a payment not only of interest charges but also of a part of the principal. A thirty-year issue of serial bonds, for example, might require that, in addition to interest costs, the payment each year include one-thirtieth of the principal. The actual life of most of these bonds is typically matched (very roughly) with the expected useful life of the asset (or, in the case of revenue-producing projects, the period over which it is expected that the revenues realized from the asset will be sufficient to repay principal and interest); bond issues to cover the construction of water and sewer projects, for instance, are often of a thirty-year life.

To this point then, the use of bond finance by state and local governments seems in reasonable accord with the principles developed in the first section of this study. The debt is primarily long term in character, has been used almost wholly for funding capital programs, and has typically been

Table 1
Outstanding State and Local Government Debt
Selected Years, 1902-1967
(Billions of dollars)

<i>Year</i>	<i>Local Debt</i>	<i>State Debt</i>	<i>Total</i>
1902	1.9	.2	2.1
1913	4.0	.4	4.4
1927	12.9	2.0	14.9
1932	16.4	2.8	19.2
1938	16.1	3.3	19.4
1946	13.6	2.4	15.9
1960	51.4	18.5	70.0
1963	64.3	23.2	87.5
1966	77.5	29.6	107.1
1967	82.1	32.5	114.6

Sources: James A. Maxwell, *Financing State and Local Government* (1965), p. 181; U. S. Bureau of the Census, *Governmental Finances in 1965-66*, p. 28; U. S. Bureau of the Census, *Governmental Finances in 1966-67*, p. 28.

repaid in a series of payments (covering both interest and principal) over a period of years corresponding roughly to the life of the asset. When, however, we look at the patterns of finance among the different states, we find little in the way of uniformity. While it is true that state and local governments employ bond issues almost exclusively to finance capital programs, not all state-local capital projects are financed by bond issues. In fiscal year 1967, for example, total capital outlays by all state and local governments in this country were \$24.5-billion. In contrast, long-term bond issues by these governments were only \$11.9-billion. It is therefore clear that many state and local governments are to a substantial extent drawing on current revenues to fund construction projects.

An intensive study of capital budgeting by state governments revealed that there are almost as many techniques for planning, administering, and funding capital programs as there are states.² These techniques range all the way from virtually no overall central planning for capital programs with finance from current revenues to detailed capital budgets assembled by a planning agency and funded primarily by bond issues. Some states, for

² See A. M. Millhouse and S. K. Howard, *State Capital Budgeting*, The Council of State Governments, 1963.

example, have certain taxes (*e.g.*, highway user taxes) the revenues from which are earmarked for construction projects; others rely solely on the surplus of existing revenues over current expenditures in the general fund. Much of this variation, incidentally, stems from an often bewildering array of legal limitations on state and local borrowing. Most states, apparently fearing the possibility of excessive bond issues necessitating heavy taxes in later years, have placed constitutional restrictions on the borrowing powers of their state and local governments. The form of these limitations, which typically includes both a specification of procedures for obtaining the authorization to issue bonds and a debt ceiling expressed as an absolute sum or perhaps as a percentage of existing property values, varies widely among the states. As a result, not only the inclination, but also the capacity for reliance on bond finance, differ radically.

What one would really like to know from all this is whether or not those states which have placed a relatively heavy emphasis on bond financing have in fact been more effective in meeting the capital needs of their constituencies. This is a most difficult question to answer, for it requires an assessment of the relative benefits and costs of the capital programs of all the states, a project which lies well outside the scope of this study (or apparently any other existing study). It certainly does not follow, for example, that the states which have spent the most on a per capita basis on capital outlays are necessarily doing the best job (although they may be). Moreover, the effectiveness of the capital program depends on the selection of the appropriate mix of projects as well as on the achievement of the most desired overall level of expenditures.

Nevertheless, there is some fairly straightforward evidence which is at least suggestive in this regard. In the first section of this paper, it was argued that bond finance is an appropriate means for funding capital programs, because current revenues are often insufficient to meet the costs of expensive, but highly worthwhile, construction projects. The point here is simply that, in the absence of bond finance, many important capital projects will not be undertaken. If this is true, we would expect to find that those states which display more reluctance to engage in bond finance provide less in the way of social capital for their residents. A look at the available data suggests that this is in fact the case. For fiscal year 1966, for example, one finds for the 48 contiguous states a significant positive correlation between state-local capital outlays per capita and outstanding long-term debt per capita. This relationship incidentally is much stronger if we consider only non-highway capital spending, since a major portion of outlays on highways is for many states financed through grants from the federal government. These relationships thus indicate that a greater willingness to engage in debt finance, as evidenced

by a larger absolute size per capita of outstanding state-local debt, is associated with a higher level of capital outlays.

These results may, however, be a bit misleading in that, interestingly enough, outstanding debt per capita is typically higher in wealthier states, states which would probably spend more on capital programs in any event. To circumvent this difficulty, one can examine, rather than the absolute level of spending, the relative "capital-intensity" of state-local budgets (*i.e.*, the proportion of the budget devoted to capital formation) across the various states. Here one finds that non-highway capital spending as a percentage of total state-local spending again bears a significant positive correlation to outstanding debt per capita. As a further test, we can look also at the *relative* reliance the various states place on bond finance, as measured by the ratio of capital outlays to long-term bond issues. The smaller this ratio, the greater presumably is the reliance placed in the particular state on bond issues to finance capital programs. As expected, one finds again a statistically significant relationship with the anticipated sign between the "capital-intensity" of state-local budgets and the ratio of capital spending to long-term debt issues: the greater the use (in relative terms) of bond issues, the larger is the proportion of the budget devoted to non-highway capital formation. It should be stressed once more that these results do not "prove" in any conclusive sense that states which place a greater reliance on bond finance do in fact provide a superior program of capital projects. The results do, however, indicate that states which make extensive use of bond issues do undertake more in the way of capital formation, and this is certainly consistent with the reasonable expectation that, in the absence of a significant use of bond finance, many important and valuable capital projects will either be passed by permanently or at least deferred until current revenues become available.

Bond Finance in New Jersey

The evidence indicates clearly that New Jersey is among those states which have avoided extensive use of bond finance. In Table 2, which provides information for New Jersey, neighboring states, and for the United States as a whole, we find in column (1) that, at the end of fiscal year 1966, total long-term, state-local debt per capita in the United States was \$516; this compares to only \$467 per capita in New Jersey. Column (2) suggests that, for state government only, debt issues in New Jersey were about at the national average. These figures are, however, somewhat misleading, for over 70 percent of this outstanding debt in New Jersey consists of long-term issues of the independent and self-financing toll-highway authorities. Omitting highway debt, one finds in column (3) that the state government in New

Jersey has used bond finance to a much lesser extent than either its neighbors or the "average" state in this country.

This reluctance to employ bond issues has led to predictable results on the level of capital outlays in the state. Specifically, Table 2 indicates that both the absolute level of spending and the proportion of the budget devoted to capital projects is lower in New Jersey than elsewhere (in spite of the state's relative wealth in terms of per capita income). In fiscal 1966,

Table 2
Outstanding Debt and Capital Outlays for Selected States,
On A Per-Capita Basis, Fiscal Year 1966

	(1) <i>Long-term debt: State and Local Government</i>	(2) <i>Long-term debt: State Government</i>	(3) <i>Long-term non- highway debt: State Government</i>
New Jersey	\$ 467	\$148	\$ 39
New York	873	230	159
Pennsylvania	555	165	122
Connecticut	679	380	100
Maryland	648	225	105
Delaware	1,202	653	348
U. S. Average	516	146	91

	(4) <i>Capital outlays: State and Local Government</i>	(5) <i>Capital outlays: State Government</i>	(6) <i>State-local capital outlays as a percentage of total state-local spending</i>
New Jersey	\$ 74	\$ 29	20%
New York	111	46	21%
Pennsylvania	87	48	24%
Connecticut	105	60	25%
Maryland	109	43	26%
Delaware	229	119	40%
U. S. Average	103	52	24%

Sources: U. S. Bureau of the Census, *Governmental Finances in 1965-66*; U. S. Bureau of the Census, *State Government Finances in 1966*.

capital outlays by state-local government were \$103 per capita for the United States as a whole, but only \$74 per capita in New Jersey; on this scale New Jersey ranked 48th among the 50 states. At the level of the state government alone, New Jersey ranked fiftieth among the states in per capita capital outlays: \$29 as compared to an average of \$52 for all states. Moreover, column (6) indicates that New Jersey devotes a relatively small fraction of its budget to capital formation; in fiscal 1966, only 20 percent of the

budget consisted of capital outlays in comparison to 24 percent for the United States as a whole.³

Fiscal behavior in New Jersey thus appears to conform to the pattern described in the preceding sections of this study: New Jersey is a state where little use has been made of bond finance and where, at the same time, relatively little public capital formation has taken place.

Summary and Conclusions

The principles of public finance suggest that, for state and local governments, bond issues should be a primary source of funds for capital (and only capital) programs. Through the use of bond finance, these governments can both spread out the payments for projects so as to obtain an equitable pattern of cost sharing among present and future residents and can avoid deferring many valuable capital programs, programs which would yield high returns in terms of the welfare of the residents of the state or locality.

An examination of the actual behavior of state and local governments in this country reveals that in many states substantial reliance is placed on bond issues to finance public capital formation: annual long-term bond issues by state and local governments are, in the aggregate, roughly half of annual capital outlays. There is, however, a wide diversity among the states in the relative emphasis on bond finance, in large part the result of a variety of constitutional restrictions on borrowing practices. The data indicate that, as one might expect, those states which place a heavy reliance on bond finance (as measured both by dollars per capita of outstanding debt and by the ratio of capital outlays to long-term debt issues) do in fact undertake more capital spending per capita and devote a larger fraction of their budgets to capital programs. New Jersey's experience conforms to these results in that it is a state which both has made little use of bond finance and has provided (in spite of her relative wealth) low levels of public capital formation. While by no means constituting conclusive proof, the evidence is at least consistent with the conclusion that New Jersey and other states which are reluctant to use bond finance for major construction programs have postponed (possibly permanently in some cases) many valuable capital projects.

³ The data in Table 2 are for fiscal year 1966, which at the time of the initial draft of this paper was the most recent year for which comprehensive data for state and local governments were available. Since that time, figures for fiscal year 1967 have been published. They indicate much the same pattern: New Jersey, for example, again ranked 48th in terms of capital outlays per capita by state and local governments and was likewise 48th in capital outlays per capita by state governments. See U. S. Bureau of the Census, *Governmental Finances in 1966-67* and *State Government Finances in 1967*.

THE LOCAL PUBLIC FINANCES OF NEW JERSEY: PROBLEMS AND PROSPECTS*

CUMULATIVE increases in the unit costs of public services, the need for expanded local programs, and a relatively unresponsive and regressive system of taxation have combined to exert an intense fiscal pressure in recent years on local governments throughout the United States. This is of particular importance in the case of New Jersey because of the major role local government plays in the fiscal activities of the state.¹ In fiscal year 1966, for example, the tax receipts of local governments in the United States were, for the average state, roughly equal to the tax receipts of the state government. In New Jersey, by contrast, the tax revenues of local governments were over three times as large as those of the state government.

Not only are the expenditures and revenues of local government large relative to those of the state, but they have been growing rapidly over the past two decades. From 1948 to 1966, local government spending in New

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¹ For an excellent study of local government in New Jersey, see *Creative Localism: A Prospectus*, An Interim Report of the County and Municipal Government Study Commission, State of New Jersey, March 11, 1968.

Jersey rose from \$484-million to \$1,793-million, which represents an annual compound rate of increase of about 7½ percent. This phenomenon of a rapid expansion in local public spending is also evident in the local finances of most other states; over these same years, spending by all local governments in the United States grew from \$13.4-billion to \$60.7-billion, an annual rate of expansion of almost 9 percent.

The Rising Cost of Local Public Services

To understand and to predict with any confidence the future course of local spending, it is necessary to try to explain why expenditures of local government have grown so much more rapidly than the overall level of national income. There has been, of course, an expansion in the quantity of public services provided by local government and in many instances an improvement in the quality of these services. But recent studies suggest that probably more important than either of these factors has been a pervasive trend of rising costs per unit of output. This is quite evident in the area of education which is by far the largest item in local public budgets. We have found, for example, that in the post-war period in this country (*i.e.*, 1947 to 1967) current costs per pupil-day in U. S. public elementary and secondary schools rose at an annual compound rate of 6.7 percent per annum.² This means that school budgets grew on the average each year by almost 7 percent simply to take care of the rising costs for a fixed student population. Expansion of facilities to provide for the growing number of pupils thus required a rate of increase in spending above this 7 percent. The County and Municipal Government Study Commission in New Jersey (hereafter the Commission) encountered some striking cases in this State of the pressure of rising costs in local public education. "For example, in one such municipality . . . the cost of education had gone from \$627,000 in 1955 to \$1,722,000 in 1965 *without significant increase in school enrollment*, and the mayor said that the coming year's budget increase would be substantial."³ In addition to education, we find rates of increase roughly comparable to those in per pupil costs in the areas of cost per patient in local government hospitals and in per-capita spending on police and fire protection (after adjustment for increases in the size of the force). The evidence does point strongly to rising costs as a major force behind the expansion in local public spending.

Improvements, no doubt, have taken place in the quality of output in many of these public services and, since the available data relate primarily

² D. Bradford, R. Malt, and W. Oates, "The Rising Cost of Local Public Services: Some Evidence and Reflections," to appear in a forthcoming issue of the *National Tax Journal*.

³ *Creative Localism* . . . , (p. 14).

to costs of inputs, it is difficult to reach any firm conclusions on the precise rate of increase of costs per unit of output. Nevertheless, it seems clear that the rate of increase in costs per pupil, for example, is far above any reasonable estimate of the increase in output of education per pupil (*e.g.*, increase in mastery of skills). Moreover, our study suggests that for functions like education and health and hospital care, advances in technology, while resulting in an improved quality of services, have not been of a cost-saving character; rather they have led in many instances to the need for specialized equipment and highly skilled personnel which has meant more, not less, spending. While we should take pride in the continuing improvements in the quality of many of these services, we should recognize at the same time that, on the whole, they seem to offer little prospect of easing the pressure on local public budgets.

Why is it that rising unit costs have been such a major problem in the provision of local public services while in manufacturing, for example, unit costs have increased only slightly and, in many cases, have even declined? William Baumol has argued recently that the rationale for this phenomenon is to be found largely in differences in the role of labor in the service and manufacturing industries.⁴ In manufacturing, labor is only instrumental in the production process: the consumer is interested in the quality of a radio or a car, and if a machine can do a better job than a man in producing the item, so much the better. As a result, technological progress in manufacturing has allowed men to be replaced by machines so that rising wages and salaries have been offset by an increase in output per man. In the service industries, in contrast, labor is typically a more integral part of the process of production. The place of the barber, for example, is not easily taken by a machine, in part because the personal attention which accompanies a haircut is regarded by many as highly desirable. In consequence, as barbers' salaries have risen along with the level of wages and salaries throughout the economy, the price of haircuts has quite understandably increased more rapidly than those of most manufactured goods, for we have been unable (or perhaps unwilling) to reduce very significantly the labor input per haircut.

Some reflection suggests that many important services provided in the public sector are in this respect much like the barbering industry. The major item in local public budgets is education, an "industry" where personal interaction between teacher and pupil is typically regarded as an essential dimension of our school programs. If, however, we are reluctant to reduce the input of teachers per pupil, there is bound to occur, along

⁴ W. Baumol, "Macroeconomics of Unbalanced Growth: The Anatomy of Urban Crisis," *American Economic Review*, June 1967, pp. 415-26.

with rising teachers' salaries, an increase in cost per pupil. The point here is simply that rising teachers' salaries mean growing school budgets (and the same seems to be largely true for other local public services including police and fire protection and hospital care). This is in contrast to many manufacturing industries where rising wages are offset by a reduced use of manpower per unit of output.

The Baumol hypothesis thus suggests a rather gloomy prospect for the future course of local public budgets. It implies that we should expect a continued and cumulative increase in public spending even if we are only to maintain existing levels of public output. On the other hand, however, it should not be forgotten that the primary source of these rising costs in the public sector is growing productivity and rising incomes elsewhere in the economy. The continued increases in output per man, resulting from a broad range of technological advances across the economy, have allowed a systematic rise in the general level of wages and salaries. This means rather paradoxically that the primary cause of rising costs in the service industries is the advance in productivity and real income in other sectors of the economy: teachers' salaries must rise to keep step with the general increase in standards of living. If we lived in a completely static economy, there would be no problem; real wages and salaries would remain unchanged, and there would exist none of the cost pressures just described. It is when the economy is growing and real income per capita is rising that we must be prepared to allow salaries in the public sector to increase so as to remain competitive with salaries offered in other sectors of the economy. And rising salaries in the absence of significant advances in productivity can only mean (as discussed above) increasing unit costs of output. But in a dynamic and expanding economy, real output and income are growing, and this implies that the resources needed to maintain (and, if desired, to expand) output in the government sector are available. The problem therefore becomes one of using some part of the growth in our real income to meet the increased costs of public programs, and it is to the subject of local revenues that we turn next.

Local Public Revenues

The mainstay of local revenue systems both in New Jersey and in the United States as a whole is the property tax. In fiscal year 1966, local governments in the United States raised almost 90 percent of their tax revenues and close to one-half of total revenues through the property tax. The reliance of local government in New Jersey on this source of funds is even more pronounced: slightly over 90 percent of tax receipts and roughly two-thirds of total revenues come from property taxes.

The property tax has particular appeal as a source of local revenue, because local property (*i.e.*, land and structures) is the one tax base that local officials can easily lay their hands on. In contrast, income or sales taxes are less attractive at the municipal level, because they are more easily avoided. If not duplicated in adjacent municipalities, a local sales tax, for example, will tend to divert purchases of goods and services away from local merchants to those in neighboring communities. Likewise, a substantial local income tax may induce existing or potential residents (especially the wealthy) to seek a residence elsewhere.

Moreover, in a system of local finance, the property tax can to some extent play a role as a "price" for the consumption of local public services. Some years ago Charles Tiebout described a model of local finance in which consumers "shop" among different communities which offer varying programs of public services.⁵ In the Tiebout system, the consumer chooses as a residence that community whose expenditure-tax program best satisfies his preferences. Tiebout suggested that, at least at a theoretical level, we can in this way get something resembling a market solution to the production and consumption of public services: people, through their selection of a community of residence, choose that output of public services which best satisfies them at the lowest "tax-price." If communities employ primarily property taxes, then the individual's property-tax liability becomes in effect the price he must pay to consume the public services available in a particular municipality.

The obstacles to the kind of consumer mobility envisioned in the Tiebout model are obviously great. Such considerations as the location of one's job, family, and friends (along with prevailing forms of discrimination) clearly exert an important influence on the individual's selection of a community of residence. Nevertheless, with the growing urbanization of society, there is some reason to believe that fiscal alternatives have become, at least for some people, a significant factor in the locational decision. In particular, individuals who work in a central city frequently have a wide choice of suburban communities in which to reside, and the quality of the local public schools, for example, may be of real importance in the choice of a community of residence.

If, in fact, individuals do respond to some degree to fiscal differentials, we would expect to be able to detect the effects of local expenditure programs and taxes on local property values and rents. Suppose, for example, that one community provides a distinctly superior public school system at property-tax rates no higher than those in other communities (as a result

⁵ C. Tiebout, "A Pure Theory of Local Expenditures," *Journal of Political Economy*, October 1956, 416-24.

perhaps of a large concentration of non-residential property or a relatively small school-age population). Individuals should find this community, other things equal, a particularly attractive place to live, because they can realize the benefits of an excellent public school system at no extra cost. As a result, the demand for residences in the community will tend to push property values above the levels of comparable properties in other municipalities. Conversely, should another community have high tax rates but an inferior program of services, we would expect property values and rents to be depressed in response to a lower demand for housing in that municipality. An interesting implication of an environment of this type is that, if a particular community raises its tax rates to expand or improve its program of public services, it is not necessarily true that the higher tax rates will depress the value of local property. While it is true that the increased tax liability will make local property less attractive, it is also true on the other hand that the enhanced program of public services will tend to increase the demand for local property and will thereby tend to offset the depressing effect on the higher taxes. What the net effect will be is unclear: property values may rise or fall depending on the relative strengths of the tax and the expenditure effects.

To see if this kind of model based on a "fiscal awareness" of the citizenry possesses any relevance to the real world, I recently undertook an econometric study of fifty-three residential communities in northeastern New Jersey, all of which are located within the New York Metropolitan area.⁶ The results of the study were in fact consistent with the implications of the model described above. In particular, with other things (including tax rates) held constant, one finds that larger expenditures per pupil in public elementary and secondary schools are associated with higher local property values. In contrast, with expenditure per pupil and other factors unchanged, increased property taxes are significantly associated with reduced property values.⁷ Moreover, the size of the coefficients suggests that the tax and expenditure effects on property values very roughly cancel out. If a community increases its property-tax rates to improve its school system (*i.e.*, through an increase in expenditures per pupil), the results indicate that the depressing effect of the higher tax liability on local property values will be approximately offset by the positive effect of the availability of superior public education. The results thus lend support to the hypothesis that

⁶ W. E. Oates, "The Effects of Property Taxes and Local Public Spending on Property Values: An Empirical Study of Tax Capitalization and the Tiebout Hypothesis," to appear in a forthcoming issue of *The Journal of Political Economy*.

⁷ These results were obtained from estimations using the two-stage least squares techniques. Two-stage least squares, rather than ordinary least squares, was employed to avoid the simultaneous-equation bias resulting from the dependence of tax rates and spending on property values.

people do consider fiscal programs in choosing a community of residence: individuals and families appear willing to pay more to live in a community which provides a high quality program of public services at modest tax rates.

In some respects, this result is encouraging. If, for example, we consider a relatively static world in which there exists a substantial degree of equality in the distribution of income, this fiscal awareness can lead to desirable results. Those people who have strong preferences in favor of public services will, in this system, tend to locate in communities with high levels of public output and higher taxes. Others, who prefer less in the way of services and lower tax bills, will locate in other communities with smaller public budgets. In this way, resources will tend to be allocated efficiently in the public sector, allocated in accord with individual tastes.

When, however, we move into a more dynamic world, one characterized by considerable inequality in the distribution of income, the movement of individuals and also of business enterprise in response to fiscal differentials can create painful conditions. In fact, the evidence suggests that these types of movements have been an integral part of a process of cumulative deterioration of the central cities of New Jersey as well as of cities in many other areas of the United States. The flight of the middle-income and wealthy classes to the suburbs has both resulted from and intensified the disparities in fiscal conditions between cities such as Newark, Trenton, and Camden and their surrounding suburban municipalities. The growing concentration of the poor in the core cities means that high tax rates raise only meager revenues, much of which must go to finance local welfare programs. As a result, programs of public education, for example, are distinctly inferior to those in suburban communities. The Commission, after noting the sad state of many public services in the central cities, found that, while the average effective property-tax rate for New Jersey municipalities was \$3.23 per \$100 of true value in 1968, the rates for Newark were \$6.62, for Trenton \$5.65, and for Camden \$4.80.⁸ Those who are able to do so, naturally leave these high-tax/low-service areas, and there is consequently a further contraction of the tax base and an associated depression of property values. It thus seems clear that in recent years one of the major effects of fiscal variables on locational patterns has been to accelerate the decay of the central cities.

The heavy reliance placed on the property tax has, for other reasons as well, produced a progressively less satisfactory local revenue system. A major deficiency of this revenue structure has been that, at constant tax rates, the property tax has proved unable to generate revenues sufficient to meet rising local budgets. With no changes in rates, property-tax revenues

⁸ *Creative Localism* . . . , (p. 47) .

appear at best to grow only at about the rate of the economy as a whole. As pointed out earlier, however, local budgets have increased at a rate substantially in excess of that of national income. This means that, to finance their spending, local governments have had to raise property-tax rates and also to seek supplementary sources of revenues. One finds as a result that effective property-tax rates (*i.e.*, nominal tax rates multiplied by assessment ratios) in this state have displayed a steady upward trend over the past two decades. This has been a source of real concern to local officials. The Commission found that, "From the Commission's field interviews it is apparent that no problem looms as large in this state as the increasing local property tax burden. In the decade 1958-1967, the total tax levy in New Jersey increased from \$711-million to \$1,445-million. This dramatic increase is part of a national trend that is still continuing."⁹

In addition, the property tax appears to be a regressive tax. Since the percentage of income spent on housing is typically higher for poorer families, the tax liability under the property tax is in most cases a larger fraction of family income for less wealthy families. This is borne out by the various empirical studies of the incidence of the property tax, which indicate almost without exception that the tax is distinctly regressive.¹⁰ This means that the overwhelming emphasis on the property tax has produced a local revenue system that falls especially heavily on lower-income families.

Summary and Conclusions

Local government expenditures in New Jersey, and in most other states as well, have increased very rapidly in the post World War II period, at a rate well above the increase in the national GNP. A primary source of these increases in spending appears to be rising costs. While local governments have certainly increased the quantity of public services and enhanced their quality, the evidence suggests that factors such as rising teachers' salaries account for a major portion of the growth in expenditures. Since it appears difficult to replace men by machines in providing services like education, the prognosis is for continued cost increases in local public services, as continued salary increases will become translated, for example, into rising cost per pupil. This means that we can expect local public budgets to continue to grow and to grow at a rate in excess of that of the economy as a whole.

The local property tax, the primary source of local revenues for nearly all local governments in this country, appears ill-suited to carry the full

⁹ *Creative Localism* . . . , (pp. 45-6).

¹⁰ For a summary of the studies of the incidence of property taxes see Dick Netzer, *Economics of the Property Tax*, 1966, Chapter III.

burden of this expansion in local budgets. A recent study suggests that individuals (at least to some extent) do take local tax and expenditure programs into consideration in selecting a community of residence. This appears to have contributed directly to the growing fiscal disparities between the central cities and their surrounding suburban municipalities. Many middle and upper-income families have fled the high-tax/low-service programs of the central cities in favor of more attractive budgetary (and other) conditions in the suburbs. Moreover, property-tax revenues have not grown sufficiently at constant tax rates to provide the funds needed for rapidly expanding local budgets. As a result localities, especially the poorer ones, have had to increase tax rates to meet local needs. In the case of the central cities, these increases appear to have hastened further the exodus to the suburbs. Finally, the property tax is generally regressive in incidence and thereby falls with particular severity on those with the least ability to pay.

What all this suggests is that basic reforms are needed in the local finances to reduce the present overwhelming reliance on the property tax. Especially in the case of the central cities, it is becoming increasingly clear that external assistance from the state and/or federal government will be required to halt the cumulative process of decay of the cities and the growing disparities between city and suburb. This must, in the final analysis, involve a complete re-examination of the functions of state and local government, a re-examination which is likely to result in a restructuring of the responsibility for the provision of certain key public services, such as public-welfare programs.

REVENUE SHARING: SOME IMPLICATIONS FOR NEW JERSEY*

Introduction

THERE are many proposals extant under which the federal government would share some portion of its income tax revenues with the states. Several years have elapsed since the development of the original Heller-Pechman plan in 1964. Despite the absence of any serious moves toward implementation, it now seems likely that revenue sharing will receive serious Congressional attention in the near future. Indeed, the chances that some sharing scheme will be adopted within the next few years appear quite high.

In general terms, revenue sharing would involve the following measures:

1. The federal government will set aside and earmark certain funds for distribution to the states.

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2. The funds will be distributed according to some specifically defined formula.
3. The shared funds will be subject to certain restrictions as to use.

Although the various proposals have this much in common, the significance of the differences among alternative plans cannot be overemphasized. Such matters as the amounts to be set aside, the basis of distribution to the states, and the nature of limitations on state uses of funds must still be decided.

It is obvious that the adoption of any revenue sharing proposal would hold important implications for all states. Shared funds, even under the more modest approaches, would provide a major contribution to state and local financing. At this still-early stage of the political discussion, the states have a clear interest in studying the consequences of alternative plans, and in making known their views.

A Brief Background

The wide attention that revenue sharing has received in recent years is attributable to a number of persistent problems in American public finance. A central difficulty is the heavy reliance of states and localities upon inelastic sources of revenue, most notably sales and property taxes. As income and gross national product increase, revenues from these tax sources tend to increase at a slower rate. Accordingly, the monies available for public expenditures at the state and local levels fail to keep pace with economic growth. There is, in addition, considerable evidence that expenditure needs have been growing and will continue to grow disproportionately; this is in part because of the age distribution of the population and in part because of the multiplication of problems accompanying increased urbanization. The total effect of these tendencies is a serious gap between expenditure needs and available revenues at the state and local levels.

While states and municipalities have encountered fiscal difficulties, the federal situation has been quite different. Elastic federal income taxes provide revenues that increase more rapidly than the size of the economy. Expenditure needs at the federal level have not generally risen as rapidly, although this fact has been masked by expenditure increases on Vietnam during the past four years. If Vietnam spending should decline, or simply fail to increase, fiscal affluence at the federal level would become apparent within a short time.

In view of the existing fiscal imbalance, revenue sharing proposals are quite appealing. The states and localities are in trouble and will require increased federal assistance if they are to meet future needs. The federal

revenue-expenditure relationship is considerably brighter, and will improve if Vietnam expenditures remain constant or decline. Revenue sharing thus seems to be an appropriate avenue for assisting states and localities, while disposing of the federal fiscal dividend.

Alternative Means of Federal Assistance

Once it is accepted that increased federal assistance to the states and localities is needed, the immediate question concerns the appropriate form of such assistance. This is no mere detail, for the way in which aid is made available will hold important implications for the distribution of income as well as for the allocation of resources among public activities. Various means of Federal assistance to states will be briefly discussed below.

1. *Revenue sharing.* The original revenue sharing proposals represent one of the simplest approaches to increased federal assistance. Most briefly, the plan developed by Heller and Pechman would proceed as follows:

A fixed proportion of the federal income tax base would be set aside and earmarked for . . . a special trust fund, from which payment would be made to . . . the states on a per capita basis with no significant conditions attached.

In other words, a fixed percentage of taxable income would be distributed, and each state's receipt would be determined by its share of national population. The plan has several virtues. It would provide a significant new source of revenue (one percent of the federal tax base would imply about \$3.5-billion for fiscal 1968). It would result in a mild redistribution of income toward the low-income states (all states would receive the same per capita payment, but higher income states would contribute more per capita to the tax fund). Moreover, the unrestricted nature of the grants would encourage innovation and experimentation by states and localities at a time when new approaches to many problems are obviously needed.

Despite these virtues, there has been extensive criticism of the Heller-Pechman plan. Some observers argue that the proposal is not sufficiently redistributive and ought to be redesigned to help "poor" states more; others, however, maintain that redistribution of income is a separate problem and that revenue sharing ought to be confined solely to remedying the federal-state fiscal imbalance. A further objection to the plan is that states might react by reducing their own fiscal effort; this would simply allow the federal government to take on a larger proportion of the existing

fiscal burden, rather than enabling the states to cope with needs for expanded programs.

Although these problems must be resolved, they are in principle amenable to rather simple solutions. The redistributive effects of revenue sharing can be manipulated directly by means of the formula used to allocate payments to the states. Similarly, an incentive system for tax effort could be built into the formula. A more basic, and potentially more difficult, group of problems concerns the uses of funds by the states. Harvey E. Brazer has characterized the most important objections to revenue sharing as:

the contention that the states cannot be relied upon to spend block grants in accord with national priorities, and that the states cannot be trusted to take proper cognizance of the needs of local governments in the allocation of block grant funds.¹

Whatever one's opinion of such fears, the problem they pose is a real one and may not be susceptible to simple solution. If deep doubts persist about the ability of the states to allocate shared funds wisely, it is likely that such grants will be modified by extensive—perhaps comprehensive—conditions. Such a “solution” would be undesirable in that it would in effect perpetuate and expand a system of federal grants-in-aid that has long been recognized to be inefficient and archaic.

It is clearly in the interests of the states to argue against pervasive restrictions on the uses of shared funds. To do so effectively requires that the states assuage the fears of those who believe that state governments, given discretion, may act unwisely. One possibility would involve state support for some type of “pass-through” provision, insuring that some portion of shared funds would be passed on to localities—especially urban localities—for the purpose of dealing with local problems. Such a provision would leave the states relatively free, yet would assure municipal officials that shared funds would to some extent be allocated in accordance with local rather than state priorities. Perhaps the greatest virtue of the pass-through is that it would direct some funds to critical areas while doing nothing to impede either state or local authorities from experimenting with new programs.

2. *Federal tax cuts.* One obvious alternative to revenue sharing is federal tax cuts, which would assist revenue raising by making it easier for the states and localities to introduce new taxes. There is, however, reason to believe that such encouragement would prove to be inefficient, if not wholly

¹ “Comments on Block Grants to the States,” in Harvey S. Perloff and Richard P. Nathan (eds.), *Revenue Sharing and the City*. (The Johns Hopkins Press for Resources for the Future, 1968), p. 100.

ineffective. State and local officials are well aware of the strong and persistent resistance to tax increases, and it seems unlikely that federal tax reductions would materially diminish this opposition.

3. *Federal tax credits.* A more meaningful alternative to revenue sharing would be establishment of a federal tax credit for state and local taxes paid. If, for example, a 50 percent tax credit were introduced, a resident of any state would be permitted to subtract one-half of his state-local tax payments from his federal tax bill. This would enable the states and localities to raise their taxes by the amount of the credit without imposing a new tax burden on their residents.

There are two important objections to the tax credit approach. First, it is not clear that the states would have an easy time raising existing taxes or introducing new ones, since the credit might be viewed by residents as a "tax break" that they are reluctant to give up. Second, the tax credit plan would have no redistributive effect among the states. The value of the credit for the residents of any state would depend directly upon their income, thus high income states would receive more and low income states less. The credit would be similar to, but less efficient than, revenue sharing under a formula that distributes funds to the states in accordance with their tax contributions.

4. *Expansion of federal grants-in-aid.* Another important alternative to revenue sharing is the expansion of existing federal grants. As noted above, such a scheme would be quite similar to revenue sharing with comprehensive restrictions on uses of funds. It would provide additional revenues, but would rob states and localities of the freedom to determine their own priorities.

5. *Income maintenance programs.* Although not widely discussed as an alternative to revenue sharing, income maintenance programs such as the negative income tax could be viewed as a meaningful substitute for the allocation of federal monies. Income maintenance combines various strengths and weaknesses of the other programs. It would not directly provide states and localities with greater revenues, but might reduce their expenditure burdens. It would direct funds to the areas of greatest need, but perhaps not in such a way as to allow governments in these areas to become more innovative and self-reliant. Programs such as the negative income tax may not represent immediate alternatives to revenue sharing; however, the states would do well to consider this possibility, at least as a longer-term substitute.

Implications of Some Distribution Formulas

Tables 1 and 2 below show the distribution of \$1-billion in shared funds to the states under a variety of formulas. These include sharing according to: state tax contribution, pure per capita, per capita modified by need, per capita modified by fiscal effort, and share of urban population. Per capita distribution modified by number of residents under the \$3,000 income level has also been calculated. It is evident, as would be expected, that the size of a state's share tends to vary rather widely under the alternative formulas.

From the standpoint of New Jersey, a number of facts are quite clear. As a high income state, its share of the fund decreases as redistribution becomes a more important part of the formula. Thus the state's share is highest when funds are distributed according to tax contribution. The share is somewhat lower when a straight per capita allocation is used, and it falls still lower when need—defined as the reciprocal of per capita income—is introduced. The state's share is relatively low when the per capita distribution is modified by an index of state and local tax effort, although not as low as might be expected on the basis of state expenditures alone. The state's share rises—although perhaps surprisingly little—when a simple index of urbanization is employed. Less surprisingly, the state's share is low under a formula that bases payment on the number of under \$3,000 individuals in residence, a rough proxy for the pattern of payment under a negative tax or other income maintenance program.

Conclusions

There is no question that the fiscal condition of the states and localities will improve under revenue sharing and that the degree of improvement will depend directly upon the generosity of the program. Apart from the size of the program, a number of important considerations for the states must be confronted. First, with respect to the type of federal assistance adopted, it seems clear that revenue sharing is to be preferred to most alternatives. The substitutes for a sharing program tend to be characterized by one or both of the following weaknesses: (a) funds are granted in a way that does not leave states and localities free to determine their own spending priorities; and (b) the federal aid leaves to the states the politically difficult task of raising existing taxes or introducing new taxes. A negative income tax may avoid these problems to a degree, but the issues raised by such programs are too complex and extensive to be adequately discussed here.

A second consideration concerns restrictions of uses of shared funds. The position of any state on this matter is quite clear: restrictions again

remove from the state the ability to determine its own spending priorities. Unless there is reason to believe that the federal government can set priorities in a better fashion than the state, such restrictions are undesirable. It must be recognized, however, that suspicion about the wisdom of state spending decisions is widespread, especially among those concerned with local urban problems. It may thus be that some kind of pass-through provision will be the price that the states must pay in order to retain autonomy in the use of remaining funds.

Finally, a state's grant depends directly upon the formula for distribution. In the case of a "rich" state such as New Jersey, this may pose a dilemma. Redistribution of income may be a desirable feature of a sharing program, yet New Jersey's grant is decreased as redistribution is emphasized. On this particular point, the state must balance national objectives against its own revenue interests.

The inclusion of a tax-effort index initially reduces New Jersey's grant below that which it would receive on a straight per capita basis. This need not be considered undesirable, however. One of the major problems in state taxation has been competition among the various states seeking to attract new industry. A fiscal-effort modification of the sharing formula would for the first time encourage states to expand their own taxes rather than reduce them. In a state such as New Jersey, which has lagged far behind in revenue raising, the long-term effect of such a provision could be highly beneficial.

It should be noted that the criteria for distributing funds are not mutually exclusive. It is possible that revenue sharing will be formulated under some combination of the criteria suggested above. Obviously, the number of ways in which this could be done is quite large.

Table 1
FEDERAL REVENUE SHARING, ALLOCATION OF ONE BILLION DOLLARS
AMONG STATES, USING VARIOUS CRITERIA
(Millions of Dollars)

<i>States</i>	<i>1</i> <i>Revenue</i> <i>Source Index</i>	<i>2</i> <i>Straight</i> <i>Population Index</i>	<i>3</i> <i>Effort Index</i>	<i>4</i> <i>Need Index</i>	<i>5</i> <i>Urban</i> <i>Population Index</i>
1. New Jersey	\$44.6	\$35.2	\$28.6	\$29.0	\$42.9
2. Alabama	10.2	18.0	17.9	29.8	14.3
3. Alaska	1.4	1.4	1.6	1.1	0.7
4. Arizona	6.4	8.3	10.0	9.2	7.8
5. Arkansas	4.8	10.0	9.6	14.3	6.1
6. California	118.3	96.6	109.8	79.4	108.4
7. Colorado	9.3	10.1	12.0	9.9	10.3
8. Connecticut	21.6	14.7	12.2	11.3	15.9
9. Delaware	4.5	2.6	2.6	2.0	2.3
10. Florida	24.2	30.3	35.6	33.0	29.2
11. Georgia	15.4	22.8	21.9	27.8	17.4
12. Hawaii	3.7	3.7	4.5	3.4	3.9
13. Idaho	2.3	3.5	4.0	3.9	2.5
14. Illinois	72.2	54.7	44.4	43.6	65.0
15. Indiana	24.6	25.1	23.6	23.3	23.2
16. Iowa	11.4	14.0	15.3	13.8	11.7
17. Kansas	9.3	11.5	12.2	11.6	10.6
18. Kentucky	9.9	16.3	13.1	21.1	10.8
19. Louisiana	11.5	18.4	22.7	23.4	16.5
20. Maine	3.7	5.0	4.9	5.9	4.0
21. Maryland	23.0	18.4	16.6	16.2	18.0
22. Massachusetts	32.3	27.5	26.3	24.1	34.3
23. Michigan	50.2	42.8	41.8	37.4	45.9
24. Minnesota	15.6	18.3	21.7	18.4	17.0
25. Mississippi	4.5	11.9	13.8	19.5	6.6
26. Missouri	21.5	23.0	19.5	23.2	23.0
27. Montana	2.5	3.6	4.1	3.9	2.7
28. Nebraska	6.2	7.4	6.8	7.5	6.1
29. Nevada	3.1	2.3	2.5	1.8	1.6
30. New Hampshire	3.1	3.5	6.1	3.6	2.8

31. New Mexico	3.4	5.2	6.9	6.4	5.0
32. New York	126.8	93.2	104.6	74.2	114.4
33. North Carolina	14.8	25.5	24.6	33.2	14.4
34. North Dakota	1.9	3.3	4.3	3.9	1.8
35. Ohio	56.7	52.6	43.1	48.9	56.8
36. Oklahoma	9.3	12.5	13.4	14.6	11.7
37. Oregon	10.1	10.0	10.7	9.5	8.8
38. Pennsylvania	62.6	59.1	50.7	56.5	64.7
39. Rhode Island	4.9	4.6	4.0	4.3	6.0
40. South Carolina	6.6	13.2	12.5	18.9	7.8
41. South Dakota	1.8	3.5	4.1	4.2	2.1
42. Tennessee	12.8	19.8	18.3	26.3	14.9
43. Texas	43.1	54.9	52.0	62.6	57.4
44. Utah	3.9	5.2	5.9	5.7	5.3
45. Vermont	1.5	2.1	2.3	2.3	1.2
46. Virginia	18.8	23.0	19.5	25.0	17.6
47. Washington	16.0	15.2	17.4	13.7	15.5
48. West Virginia	6.4	9.2	8.8	11.9	5.7
49. Wisconsin	19.7	21.2	24.0	20.9	20.1
50. Wyoming	1.5	1.7	2.2	1.7	1.5
51. District of Columbia	6.1	4.1	3.1	3.0	6.1

Source: U. S. Department of Agriculture.

Col. 1: (Federal Personal Income Tax paid by the state's residents)_i / $\sum_{i=1}^{51}$ (Federal Personal Income Tax paid by the state's residents)_i

Col. 2: (Population of the state)_i / $\sum_{i=1}^{51}$ (Population of the state)_i

Col. 3: (Population)_i (E)_i / $\sum_{i=1}^{51} [(Population)_i (E)_i]$; where (E)_i refers to "Total Revenue of the state raised from state and local sources/State Personal Income"

Col. 4: (Population)_i (N)_i / $\sum_{i=1}^{51} [(Population)_i (N)_i]$; where (N)_i refers to the reciprocal of per capita income for each state

Col. 5: (Urban population of the state)_i / $\sum_{i=1}^{51}$ (urban population of the state)_i

Note: The results of the above formulae must be multiplied by the amount to be allocated, one billion dollars, to equal the figures shown in the table. Due to rounding, totals for all states may not exactly equal one billion dollars.

Table 2

FEDERAL REVENUE SHARING ALLOCATION OF ONE BILLION DOLLARS
AMONG STATES, USING VARIOUS CRITERIA
(Dollars per capita)

<i>States</i>	<i>Revenue Source Index</i>	<i>Straight Population Index¹</i>	<i>Effort Index</i>	<i>Need Index</i>	<i>Urban Population Index</i>
1. New Jersey	\$6.46	\$5.10	\$4.14	\$4.20	\$6.22
2. Alabama	2.90		5.09	8.47	4.06
3. Alaska	5.14		5.88	4.04	2.57
4. Arizona	3.95		6.18	5.68	4.82
5. Arkansas	2.45		4.91	7.31	3.12
6. California	6.25		5.80	4.19	5.73
7. Colorado	4.70		6.07	5.00	5.21
8. Connecticut	7.51		4.24	3.93	5.53
9. Delaware	8.78		5.07	3.90	4.49
10. Florida	4.07		5.99	5.55	4.91
11. Georgia	3.45		4.91	6.23	3.90
12. Hawaii	5.15		6.26	4.73	5.43
13. Idaho	3.31		5.76	5.62	3.60
14. Illinois	6.73		4.14	4.06	6.06
15. Indiana	5.00		4.79	4.73	4.71
16. Iowa	4.15		5.02	5.02	4.26
17. Kansas	4.13		5.42	5.15	4.71
18. Kentucky	3.11		4.11	6.63	3.39
19. Louisiana	3.19		6.30	6.49	4.58
20. Maine	3.76		4.98	6.00	4.07
21. Maryland	6.36		4.59	4.48	4.98
22. Massachusetts	6.00		4.88	4.47	6.37
23. Michigan	5.99		4.99	4.46	5.48
24. Minnesota	4.36		6.06	5.14	4.75
25. Mississippi	1.93		5.93	8.38	2.83
26. Missouri	4.76		4.32	5.14	5.10
27. Montana	3.56		5.84	5.55	3.84
28. Nebraska	4.25		4.67	5.15	4.19
29. Nevada	6.82		5.50	3.96	3.52
30. New Hampshire	4.55		8.95	5.28	4.11

31. New Mexico	\$3.32	\$6.75	\$6.22	\$4.89
32. New York	6.94	5.72	4.06	6.26
33. North Carolina	2.96	4.92	6.64	2.88
34. North Dakota	2.92	6.61	6.00	2.76
35. Ohio	5.50	4.18	4.74	5.51
36. Oklahoma	3.78	5.45	5.93	4.76
37. Oregon	5.16	5.47	4.85	4.50
38. Pennsylvania	5.40	4.37	4.87	5.58
39. Rhode Island	5.45	4.45	4.78	6.68
40. South Carolina	2.55	4.83	7.30	3.01
41. South Dakota	2.63	6.01	6.15	3.07
42. Tennessee	3.29	4.71	6.77	3.83
43. Texas	4.00	4.83	5.82	5.33
44. Utah	3.86	5.85	5.65	5.25
45. Vermont	3.70	5.67	5.67	2.96
46. Virginia	4.17	4.32	5.54	3.90
47. Washington	5.36	5.83	4.59	5.20
48. West Virginia	3.56	4.90	6.63	3.17
49. Wisconsin	4.73	5.76	5.02	4.83
50. Wyoming	4.55	6.68	5.16	4.55
51. District of Columbia	7.54	3.83	3.71	7.54

For data and definitions, see Table 1.

¹ Per capita grants based on straight population are, of course, identical for all states.

III

STUDY REPORTS ON URBAN ISSUES

SOME APPROACHES TO URBAN PROBLEMS*

OF critical concern to the State of New Jersey are the severe economic problems that beset its cities and the residents of these cities. Poverty, blight and deterioration in municipal services are of particular importance in a state containing a substantial number of cities of large and intermediate size.

In an earlier report on urban problems to a conference organized by the Economic Policy Council, the discussion was focussed primarily on the role of municipal governments and, in particular, on the reasons for the very rapid and persistent growth in the cost of public services. It was shown that by the nature of their technology it is unusually difficult to institute labor saving innovations in this type of activity. The quality of the product of many of these services—such as teaching, medical care, police protection—

* Prepared by William J. Baumol, Chairman of the New Jersey Economic Policy Council and Professor of Economics, Princeton University.

depends largely on the number of man-hours devoted to them. As a result, while in the rest of the economy the cost consequences of rising wage-rates are offset to a considerable extent by rising output per man-hour, in urban services the scope for such offsets is extremely limited. The consequence has been a very rapid rise in the costs of municipal government whose financial implications for our cities are all too obvious.

In the current report the portion of the discussion relating to urban problems turns away from the role of government. Rather, it concerns itself with the means that can be used to stimulate individuals and firms to be more effective in helping themselves. A major part of the analysis deals with the financing of business enterprise in ghetto areas, a subject which has attracted increasing public attention. The remainder of the report deals with the general issue of incentives to the private sector, an approach which has been emphasized by the Nixon administration. In addition to some illustrative proposals, the discussion indicates that incentives are not merely a matter of tax relief and that they need not be offered only to business firms.

Why Special Incentives to the Private Sector?

In recent years we have come to expect increasingly that business firms will contribute their assistance toward meeting the urgent goals of society, and that they will do so as a matter of management's sense of social responsibility. Business men have been exhorted to help in the training of the unskilled, to help—directly and indirectly—through the provision of capital in the clearing of slums, to provide direct contributions to educational institutions, to help reduce pollution, and so forth. On many of these matters there has been a commendable response, and often the response was immediate and came with no strings attached.

Nevertheless, it is likely that the free enterprise system will show its full strength in the implementation of social goals when this is done not as a matter of charity and good works but in the course of the firm's normal business operation, as part of the workings of the profit system. No management can be expected to make any moves that endanger substantially the interests of its stockholders. If slum clearance or training of the unskilled are highly unprofitable propositions, it would be irresponsible of the business man to commit any large amount of investment to these purposes. But if, on the contrary, they are profitable, no exhortation is needed to get management to undertake these activities.

Dependence upon management's sense of social responsibility, therefore, leads inevitably to tokenism, whether or not management wishes to

do more. If, for example, we look carefully at the much publicized commitment of a number of business firms to finance renewal in Newark, we note that the amounts provided are pitifully small. This observation is not intended as a criticism of those who have undertaken the task. Probably they have done all that can reasonably be expected of them—and more. Rather they are in no position to mount a full scale attack on the problem unless the market mechanism is on their side in the process.

Similarly, the remainder of the private sector, and particularly the individual consumer, plays an important role in determining the quality of life in society. When he drives a car he pollutes the atmosphere. When he wastes water he imposes a cost on the entire society. But he also cannot be expected to respond simply to exhortation. Concrete incentives will have to be provided before any substantial change can be expected in the flow of social costs and benefits flowing from the body of consumption decisions. Before turning to specific illustrations of such programs it is important to emphasize two fundamental points.

First, a program of incentives to the private sector is intended only as a substitute for exhortation, not as a replacement for vital government activity. Economists have long recognized the existence of social needs that can be served effectively only by the public sector. Hence proposals for incentive programs should not be interpreted as an excuse for the abandonment of vital federal, state, and local programs.

Second, a program of incentives should not simply be a give-away of government funds to private agencies. As will be clear from the following illustrations, not all incentive payments need be payments to business firms. And in many cases there need be little or no increase in outlays, or reduction in taxes collected by the state. Taxes that are currently collected have some obvious consequences for business incentives, and in some cases all that is needed is a reapportionment of the tax burden, one that makes taxes fall more heavily on landlords who own slums but do not rehabilitate them, or on industries which pollute the atmosphere and waterways. Several of the proposals listed below should, as a result, involve little or no cost to the state.

Even where some programs should lead to reduced tax collection (say, from firms providing additional employment to ghetto residents), they will yield offsetting increases in taxes collected as a result of increased employment, income, and expenditure.

Areas for Incentive Programs

Incentive programs can play a number of roles in the amelioration of urban problems. Among the programs that have been suggested are proposals intended to stimulate entrepreneurship in ghetto areas, raise employment of the unskilled, promote gainful employment among welfare recipients, effect improvements in substandard housing, facilitate work by mothers, and broaden preschool education. We now turn to examples of approaches that have been proposed to achieve some of these results.

1. Stimulating Entrepreneurship in Ghetto Areas

One of the most pressing difficulties facing the potential new entrepreneur from the ghetto is the task of obtaining funds. He is generally considered a poor risk, to whom private financial agencies are reluctant to lend. The state can get considerable leverage from its funds by undertaking to insure loans to ghetto businessmen. Experience may well show that the default rate will be surprisingly low, as it was in some of the federal farm programs.

Repayment by the new entrepreneur might be made easier and far less risky by permitting him to borrow with the aid of an instrument such as the "income bond," described in detail in the following contribution. An income bond is a security which has one characteristic of the common stock—interest payments are not required in a year in which the issuing firm has no net earnings. The state might find it necessary to guarantee advance payments to the holders of such bonds in such years of deficit operation.

It may also be desirable to exempt new ghetto enterprises from the payment of some state taxes for the first few years of their lives. In addition, tax incentives might be provided to existing industrial and commercial firms to aid Negro entrepreneurs. However it might be difficult to formulate such special purpose tax regulations in a way that avoids difficulties arising out of their discriminatory character. For this reason the insurance proposal may be less expensive and more palatable politically.

2. Stimulating Employment of the Unskilled

Employers may be reluctant to hire disadvantaged persons with little training and little job experience, because of fear of increased social insurance costs. This may be particularly true of workmen's compensation, temporary disability insurance, and unemployment insurance costs if employers are experience-rated.

To eliminate any possible obstacles posed by these valuable programs, employers can be offered assurance that hiring of disadvantaged persons will in no way increase these social insurance premiums. Specifically, the following proposal illustrates the approach in question:

The employer's workmen's compensation payments would be put into a pool, similar to the Assigned Risk pool, and the Compensation Inspection and Rating Bureau would arrange for the normal workmen's compensation policies to be written for the group of employees on a statewide basis. Temporary disability insurance and unemployment compensation insurance payments would be made to the state, but segregated into a separate pool. In the event of a compensable accident, the insurance pool would handle all of the details of the accident in the normal way. But in the event that there were a deficiency in the pool, the state would have to be ready to make this up by an appropriation from general revenues.

The other types of insurance would be treated in a similar fashion. In essence, this scheme would then serve as a guarantee to the employer that social insurance costs of these three programs should pose no financial obstacle to the employment of the disadvantaged.

3. Stimulating Gainful Employment Among Welfare Recipients

The state now pays a substantial portion of general welfare costs and shares with the federal government the costs of the categorical assistance programs. Everything possible should be done to encourage persons on the assistance rolls to find their way into gainful employment. One possible obstacle is such a person's fear that if he should not be successful at his job there may then ensue endless delays in once again receiving the support essential for his family.

For this purpose the state might guarantee to each person now receiving welfare or payments under one of the categorical assistance programs that, should he find employment which was subsequently terminated, he could return without delay to the welfare or categorical assistance program to which he was previously entitled. This will merely require a small fund on the part of the state to assure prompt payments until the time when the technical requirements for eligibility are met once again.

4. Improvements in Substandard Housing

Current tax regulations utilizing the usual process for tax valuation of slum properties provide precisely the wrong sort of motivation to landlords. Under current regulations improvement of such properties normally results

in an increase in the landlord's tax burden. On the other hand, the taxes of the owner who permits his property to deteriorate usually do not increase. This means that the tax laws, as currently constituted, penalize private initiative designed to improve substandard properties, and may even reward the landlord who gives only minimal attention to his structures. A simple change in tax laws penalizing those with deteriorating properties on their hands and granting some, perhaps temporary, exemptions to those who improve their properties might well have little effect on the revenues collected by the government, but make a substantial difference to the behavior of property owners and the state of real property in less affluent areas.

Specifically one might provide as tax credits some proportion of expenditures on upgrading of residential properties, and the raising of taxes on slum houses for each year they are classed as "substandard." To the extent that these taxes do not offset the upgrading subsidies, the state might have to compensate local governments for net revenue losses.

Another program which might improve the attractiveness of rehabilitating ghetto areas involves government assistance in the coordination of private investments in improved areas. Normally any one slum landlord acting by himself will not find it attractive to put much money into his property if it will continue to be surrounded by slums which make the area as a whole unattractive to tenants. A comparable problem in the exploration of potential oil-bearing properties has been solved in a way which might serve slum areas also: in effect, regulations were established which make for compulsory cooperation.

In the petroleum industry exploration of a field is likely to be beneficial to all owners of portions of that field, and yet no one of them may be able to afford the exploration outlay by himself. However, any such property owner may make what the courts consider to be a "fair offer," giving the others the option of either participating in the cost of exploration, or of providing a share of their profits resulting from any strike to the property owner who financed the exploration. In that case the courts will force the remaining property owners to participate directly or indirectly by acceptance of one of the alternatives under the fair offer.

In slum clearance a similar program might prove effective and relatively costless to the state. Any neighborhood ownership group could be empowered, on the basis of a fair offer, to force all landlords in the area to participate in a program of improvement. With the assurance that the entire neighborhood will be upgraded it might be easier to obtain financing, and other benefits such as economies of large scale operation might become available.

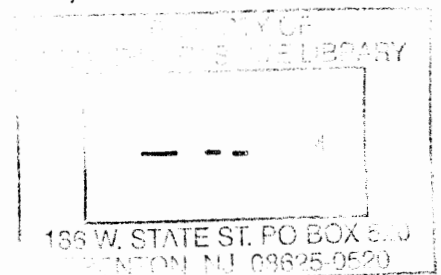
The preceding proposals are, of course, intended merely to illustrate some incentive programs that might be utilized to stimulate private activity to improve economic conditions in the cities. Many other such programs are obviously possible. Instead of proliferating examples further it may be useful to explore one of them in greater detail, as is done in the following contribution.

INCOME BONDS AS A FINANCING INSTRUMENT FOR BUSINESSMEN IN DEPRESSED AREAS*

Introduction

THE following is the outline of a plan for government agency development loans to encourage entrepreneurship in depressed areas. The justification for the plan is the belief that an important ingredient in the war on poverty is the channeling of funds to uses that contribute to the pride and initiative of the recipient and that enable the recipient to help himself. Such a plan may, therefore, help to accomplish objectives that elude direct legislation and administration. The need for such a plan is clear, especially to potential entrepreneurs in the ghetto who feel shut off from the normal flow of credit. One of the most pressing difficulties facing the potential new entrepreneur from the ghetto is the task of obtaining funds. The problem exists despite extensive commercial banking facilities in our major cities and in spite of the Federal Small Business Administration loan and guarantee programs which operate throughout New Jersey.

* Prepared by Burton G. Malkiel, Department of Economics, Princeton University.



The Proposed Income Bonds

The plan is to make available "soft" loans to businessmen who qualify on the basis of residence in a depressed area or some other well-specified criteria. A depressed area may be defined by unemployment rates, per capita income, or other measures. The loans would be "soft" in terms of liberalized eligibility standards, long maturity, and lower interest (coupon) rates than would be required to induce private lenders into the market.

The main feature of the proposal, however, is that the loan instruments take the form of income bonds and that they be subordinated to all other indebtedness. An income bond is a debt instrument on which the interest payments specified in the contract must be paid in a given accounting period only if enough money to do so has been earned in that period. Otherwise the interest payment is forgiven; it does not accrue as a payment to be made at a future time. While such bonds do have a fixed maturity date, the typical income bond has a relatively distant maturity.

Currently outstanding income bonds in the United States are mainly obligations of railroads. Most of these securities were issued as a result of corporate reorganizations during depressed times, such as the 1930's. The history of these issues, their association with companies of secondary credit standing, and the relatively low degree of protection offered the bondholder, have given these issues a rather low investment rating. Thus, such securities would not be an attractive investment medium for private profit-maximizing buyers. The very features that make these issues unattractive to private buyers, however, would seem to indicate that they are a particularly felicitous instrument to encourage entrepreneurship in depressed areas. From the standpoint of the company issuing the bonds, there are the important advantages that the interest must be paid only when earned, and that the interest paid is believed to be tax-deductible.¹ Moreover, the bonds would be subordinated to all other indebtedness and thus the entrepreneur obtains something akin to equity without giving up his stake in the company to a third party. From the point of view of potential private lenders of other funds, the new bonds would be considered somewhat equivalent to equity capital; thus these bonds would make it far easier for the ghetto firms to obtain supplementary private capital than if the loans in question were normal bonds.

¹ It should be noted that no ruling from the Internal Revenue Service has been obtained concerning the deductibility of the interest payments from the corporate income taxes of the recipient firms.

Some Details of the Proposal

Needless to say, there are many details of such a plan that require further study. Here we simply outline a set of possible specific provisions of the proposed plan.

1. Eligibility Requirements

It may not be desirable to make race or color a principal condition for eligibility, although this is one possible criterion. The income-bond loans might be called equal-opportunity loans, and anyone would be eligible who could reasonably claim he was deprived of equal opportunities. Alternatively, it may be desirable to allow all individuals who live in a depressed area to be eligible for income-bond loans. If eligibility is based on residence in a depressed area, then some minimum length of residence would probably be an appropriate requirement. One definite condition for eligibility, however, should be that the loan applicant has a potentially viable business proposal, and that there is a reasonable chance for the venture to succeed. In addition, income bonds would be made available only if sufficient alternative sources of financing were unavailable. Requests from businesses that promise to be beneficial to the ghetto community in terms of providing employment opportunities might be especially favored.

2. Technical Assistance

It will be essential that a program of technical assistance and surveillance be instituted to accompany the loan program. This is especially important in areas where few residents are likely to possess the entrepreneurial skills required to run a business. In the beginning, a small staff of experts in small business administration would be required, perhaps to be supplemented by volunteer businessmen who would donate their services to aid loan recipients. Later, successful early recipients of loans under the program might be included in the technical assistance part of the program. It would be desirable for technical assistance to begin at the stage of the initial preparation of the loan application.

3. Definition of Income

Details will have to be worked out as to how income is to be defined for the purpose of determining the interest liability on the income bond. For small family businesses, corporate income cannot be used as a basis because the tax laws encourage those families to take all profits out in salaries or in other ways in order to avoid the double

taxation of income. In such cases, owners' salaries and probably other expense items may have to be used in addition to corporate income in determining interest liability. Even for larger businesses, however, there would be problems as to the appropriate measurement of income, and it is clear that a set of accounting guide lines would have to be established and carefully monitored.

4. Interest Payments

Interest payments might be set at a rate considerably lower than that required to induce private capital to enter the market. Nevertheless, the rate should be high enough to insure that successful businesses be required to make sizeable interest payments back to the original loan fund.

5. Sinking-Fund Requirement

It would seem desirable to have a sinking-fund requirement to insure that very successful businesses paid back the principal amount of the loan before the nominal maturity date of the loans. For example, if in any year earnings exceeded twice the stated interest payments on the bonds, the firm might be required to pay back a certain amount of the principal amount of the loan. Thus, those successful firms would be returning the original capital to the funding agency for reuse in other needy cases. Such a sinking-fund requirement, coupled with the obligation of interest payments, could make the original income-bond fund a revolving fund that, once established, might not need continual additions to its capital. An illustrative sinking-fund arrangement is shown below.

6. Administration of the Income-Bond Fund

It would be desirable for the loan fund and the technical assistance program to be administered by a special authority such as a State Development Corporation. The existence of such a quasi-autonomous agency would not only provide a useful organization for a professional assistance staff but would also minimize the dangers of political pressures in the award of loan funds.

Advantages of the Income Bond Proposal

The income-bond proposal offers a variety of benefits. First, it would help to fill the gaps in existing programs for the channeling of funds to ghetto businessmen. While the Small Business Administration has performed a very useful service, it is clear that only a small volume of its funds

has gone into ghetto areas. Moreover, while a thorough study of the investment-guarantee approach is beyond the scope of this proposal, there are reasons to believe that a guarantee or insurance program such as that of the Small Business Administration will fail to meet the needs for which the income-bond proposal is designed. It is essential that those who have long been denied the opportunity to participate in the free-enterprise system be given every chance to do so now. As Floyd McKissick recently stated, "The name of the game in this society is money. What is urgently needed is an agency to provide risk capital to black businessmen." Such an agency does not exist at the present time.

A second advantage of the income-bond proposal is that the State can get considerable leverage from its funds by making this type of loan. In the first place, it might be possible to convince one of the large foundations to match the State funds dollar for dollar. For example, the Ford Foundation currently has a program that supports investments that are likely to provide high social yields. The current proposal might fit in well with the commitment that the Foundation has already undertaken.

But this is not the end of the story. If the firm had obtained in this way two dollars of "equity capital" for every dollar provided by the State, it might be quite possible for it to raise another two dollars from private lending sources. This is so because the income-bond holders would, in effect, be providing a large equity cushion and taking the major risks. Assuming, then, that private sources provided two dollars' worth of loans, we see that under a set of very plausible circumstances four dollars of capital would flow into business for every one dollar put into business by the State. Thus, the State could obtain a large multiplier effect from the adoption of this proposal.

A third advantage of the proposal is that it maximizes the implicit contribution of the federal government to a program offering capital to new entrepreneurs. By providing what is very close to equity capital on terms that qualify for all the tax advantages of debt, the State takes more effective advantage of the opportunities offered by federal tax arrangements.

Illustrative Sinking-Fund Arrangement

<i>Assumptions:</i>	Loan amount	\$100,000
	Interest rate	7 per cent
	Nominal maturity date	30 years

If the firm's profits are at least twice as great as interest payments, one half the excess of profits over interest payments would be used to retire outstanding bonds.

HYPOTHETICAL PROFIT HISTORY OF THE COMPANY

<i>Year</i>	<i>Profits Before * Interest</i>	<i>Interest Payments on Unpaid Balance</i>	<i>Repayments of Principal</i>	<i>Earnings Retained to Build up Equity of Owner</i>
1	\$ 0	\$ 0	\$ 0	\$ 0
2	7,000	7,000	0	0
3	27,000	7,000	10,000	10,000
4	46,300	6,300	20,000	20,000
5	64,900	4,900	30,000	30,000
6	82,800	2,800	40,000	40,000

* For simplicity, this illustration takes no account of corporate income taxes.

We note that under the hypothesized circumstances the entire loan will be paid off in 6 years. Thus, for successful companies, the nominal maturity date would greatly exceed the actual maturity. Moreover, this sinking-fund provision will not impair the firm's original capital. This is so because the plan provides for earnings retentions equal to the sinking-fund payments. In effect, the owner's equity is substituted for the government's "equity loan." Moreover, a successful firm with the profit record hypothesized here probably would experience less difficulty in obtaining additional conventional loans than a newly formed business enterprise. It might be desirable, however, to allow a more lenient sinking-fund arrangement. An expanding firm will need a growing equity capital base, and too stringent repayment provisions could limit the growth of the firm. Thus, the sinking-fund provision might be amended to facilitate growth in the owner's equity by lowering the percentage of the firm's profits (after interest payments) that must be used to retire the outstanding income bonds.

IV

SUPPLEMENTARY STUDY REPORTS*

Introduction

THIS section contains three reports concerned with comparative analysis of economic changes over time. In the first report, Norman White presents his estimates of New Jersey's Gross State Product and its industrial components. Such estimates constitute more comprehensive measures of New Jersey's economic activity than were hitherto available. They permit broad comparisons of economic growth between state and nation as well as between New Jersey and its neighbors. The common structural framework makes it possible to analyze not only the comprehensive aggregates but also their industrial components. Finally, since most national forecasts are made in terms of GNP, variants of national forecasts can be translated into the associated estimates of state activities.

* These reports are partial products of a program of continuing analysis of the New Jersey economy which the Council has sought to encourage. They are provided as illustrations of studies which should be pursued on a sustained basis. The interpretations are those of the authors rather than the Council.

While an overall view of New Jersey's economic development is important, one has to go into more industrial detail in order to understand the strategic determinants of short-term and long-term performance. An approach to industrial monitoring, and some preliminary results are illustrated in Gerhard Bry's paper on *Employment Trends in New Jersey's Industries and Their Implications for Industrial Strategy*. The study identifies strong and weak industries and presents specific suggestions for systematic monitoring, analysis and policy implementation. To illustrate the potential value of a systematic approach, the author follows up with an analysis of two problem industries—transportation equipment and electrical machinery production. Again, an attempt is made to demonstrate the implications of the analysis for industrial policy formulation and for remedial action.

After the two articles on industrial development were completed, revised employment data (based on 1968 benchmarks) became available for New Jersey. On the whole, the revisions were upward and tended to improve New Jersey's record. The author, Professor Gerhard Bry, decided not to change the articles and the related exhibits. The reasons are as follows: The benchmark adjustments do not affect any of the findings and conclusions; the data for the neighboring states and the nation are not yet published in adjusted form; when the adjustments were substantial, supplementary measures were provided in the text.

In preparing these reports, as well as the Statistical Appendix, we relied heavily on the data provided by Arthur O'Neal and George Hutchins of the New Jersey Department of Labor and Industry. We are grateful for their help.

ESTIMATES OF GROSS STATE PRODUCT FOR NEW JERSEY, 1948-1969*

Introduction

WHILE gross national product (GNP) has become a household word, it is only recently that an interest has developed in its state counterpart gross state product (GSP). Just as GNP is the dollar value of all goods and services produced in the nation, so GSP measures the value of the goods and services produced in a state.

Why should we be interested in measures of gross state product? Primarily because it is the most comprehensive measure of a state's economic activity—be it in current dollars or in dollars of constant purchasing power. In either form, GSP for any given state permits comparison of this state's aggregative economic activity with that of other states and with that of the nation as a whole. Such comparisons may be made not only for the overall measure but also for industrial sectors or other components. Furthermore, since forecasts of national business activity are most frequently expressed in terms of GNP and its components, the availability of a similar accounting framework in states may facilitate the translation of national prospects into state prospects. Such translation can be based on informal comparisons of

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short-term and long-term relationships between state and national economic activities, or on formal models which express relevant relationships by mathematical functions.

General Approach

Desirable as GSP accounting appears to be, the necessary statistical information became available only recently. Even now, much estimation goes into the derivations of GSP figures. As the coverage and the detail of the national income and product accounts have increased, some of the national income components have become available for individual states. The first series published by state and by industrial sector was total personal income. Several economists have used this series as a basis for the estimation of gross state product. The general method used by these economists is straightforward. Both personal income and gross national product are available by industry, and for each industry group personal income disbursed as factor compensation constitutes a large part of the value of its net product. Therefore, in any state, each industry group's personal income can serve as an estimator for the gross product originating in that sector of the state's economy. The industry sector estimates are added to produce an estimate of total gross state product. There are different versions of this general method, depending upon the personal income series used ¹ and the method of adjusting the selected income series to the level of gross state product originating in that sector. Several of these versions will be discussed briefly.

The original method of constructing a gross state product was developed by Kendrick and Jaycox.² For each major industry group, income received by a state's inhabitants for participation in current production is multiplied by the national ratio of national income to income received in that industry group. The resulting estimates are net of capital consumption, business taxes, and subsidies. For each sector these items are estimated separately on the basis of national ratios of the three components to national income. By adding these values to net income originating in each sector, an estimate of GSP originating in that sector is obtained. This method is applied to all sectors except agriculture and government, since the required data for these sectors are available independently.³ The sum of the sector components yields the estimate for total gross state product.⁴

¹ There are two basic series used. One is total personal income and the other is civilian income received for active participation in current production.

² John W. Kendrick and C. Milton Jaycox, "The Concept and Estimation of Gross State Product," *The Southern Economic Journal*, October 1965, pp. 153-168.

³ U. S. Department of Agriculture, *Farm Income Supplement*, a Supplement to the July 1966 *Farm Income Situation*.

⁴ *An Approach to Estimating New Jersey Gross State Product*, Unpublished Working Paper. New Jersey Department of Labor and Industry, Bureau of Statistics and Records, September 1967. The approach described was used by Steve Roberts in 1967 to make GSP estimates for New Jersey from 1949 to 1965.

Two other methods have been applied. Both are similar to the first and differ among themselves only with respect to the basic series used. Daniel Suits in an econometric model of Michigan takes the state personal income series and adjusts it sector by sector to GSP levels, using national sector ratios of GNP to personal income.⁵ In two of the sectors, Suits estimates GSP by a different approach. The state product for the manufacturing sector is derived by applying to manufacturing value added in the state (as published in the Annual Survey of Manufacturers) the national ratio of gross product to value added. Suits' mining series is similarly derived from the value added data published by the U. S. Census of Mineral Industries. Since the census is taken only every fourth year, values for the intervening years were interpolated on the basis of personal income originating in mining.

L'Esperance and Nestel of Ohio State University have constructed gross state product estimates for all 50 states.⁶ In most sectors, they use national ratios of GNP to income received. In the farming and federal government sectors, value added data formed the bases for gross product estimates, and in the non-federal portion of the government sector, O.B.E. data of state and local government wages and salaries were used. Supplements to wages and salaries were estimated by applying the appropriate national ratios. GSP estimates for agriculture were based on the U. S. Department of Agriculture figures as in the Kendrick and Jaycox method.

Some Assumptions and Problems

Several assumptions underlying GSP estimates should be pointed out. A major assumption is that any broad sector in a state's economy is sufficiently similar to the corresponding national sector so that national ratios (such as gross product to income received) are applicable. This presumes average sector productivity to be the same in the state and nation. Note, however, that no assumption is made about the relative importance of the different sectors. In fact, it is the use of actual sector income for each state which imparts the economic characteristics of the state to the GSP estimates. Moreover, even if productivity levels are not the same in a given state and in the nation, productivity changes may well be the same. This implies that changes in the estimated values of GSP over time will be realistic even if the levels are not entirely correct.

Current dollar GSP estimates are adjusted for price changes by national sector deflators. This procedure is justified only if neither price movements

⁵ *Econometric Model of Michigan*, Research Seminar in Quantitative Economics, Department of Economics, University of Michigan, June, 1965.

⁶ W. L. L'Esperance and G. Nestel, *Gross State Products, 1955-1965*. Bureau of Business Research, The Ohio State University, 1966.

nor intra-sector composition differ substantially in state and nation. In principle, one can test the validity of the assumptions of similar productivity, price, and product-mix, but such tests have not yet been carried out.

One major conceptual problem arises because income earners may earn their money in one state and reside in another. Personal income and related GSP estimates can be made on a "where earned" (establishment) basis or on a "where received" (residence) basis. The former concept is relevant for the derivation of income and product estimates by industrial origin for a given area. The second concept is appropriate if total income, disposable income, or per-capita income for an area's residents is required in an analysis of issues relating to marketing or social welfare. The GSP estimates discussed so far were based on the income received statistics published by the Office of Business Economics of the U. S. Department of Commerce (O.B.E.). These statistics, though based originally on information provided by establishments located in New Jersey, were adjusted by the O.B.E. to reflect the domicile of the income receiver, so that the published New Jersey series reports the income received by residents of New Jersey.⁷ The difference between income paid out within the state and income received by residents of the state is sometimes referred to as the "situs effect." This effect must be expected to be quite pronounced in New Jersey since a large number of the state's residents work in New York or Philadelphia and a smaller number of New Yorkers and Pennsylvanians commute to and from their place of work in New Jersey. We have been able to obtain income figures on an "establishment" basis.⁸ Most of our GSP estimates for New Jersey will be reported on this basis, but we shall also provide estimates on a "residence" basis. To our knowledge this is the first time that GSP is calculated both ways. Hence the most appropriate series for any given purpose can be selected by prospective users, and a rough estimate of the importance of the situs effect can be obtained.

Estimating Gross State Product for New Jersey

The GSP series for New Jersey presented in this study was constructed in accordance with the method used by L'Esperance and Nestel, of Ohio, except that the estimates for the governmental and agricultural sectors were made without making use of some direct information that was available. This neglect cannot lead to serious errors because the total agricultural income is very small and because a very large part of income originating in government consists of wages and salaries. The Ohio method was used for three reasons.

⁷ The term "income received" is intended by O.B.E. to indicate the residence basis of the data. However, this designation is not clear enough. It would be desirable to make the residence character of the published data more explicit.

⁸ We would like to thank Mr. Robert Graham, Chief of the Regional Economics Division of O.B.E., for his help in this matter.

First, the income received series provides a more comprehensive industry income concept than the personal income series for which only the wage and salary components are given by industry division. Second, not much seemed to be gained by showing explicitly the presently somewhat uncertain estimates of capital consumption and profit for each sector (as is done by Kendrick and Jaycox) rather than implicitly considering them in the adjustment factor (as done by L'Esperance and Nestel). Third, the required computations are very simple.

For each sector, income received was raised to a GSP level by the corresponding national ratios. The resulting estimates can be found in the first panel of Table 1. The implicit assumption of parallel productivity changes in states and nation has independent support in the case of New Jersey.⁹

For the estimate of real GSP, national GNP sector deflators were used. Since mining represents such a small percentage of total economic activity in New Jersey, it was, for deflation purposes, included in the "other" sector. In addition to mining, this sector also contains miscellanea and the "statistical discrepancy" which represents the difference between alternative estimating procedures. The results are presented in Table 2. (Tables begin on page 73.)

The Behavior of Gross State Product in New Jersey

New Jersey GSP, estimated on an establishment basis, has grown between 1948 and 1967 by 225 percent. This was somewhat faster than that of national GNP, which increased by 206 percent during the same period. A considerable portion of these increases can be ascribed to price inflation. After adjustment for price changes, the growth measures shrink: from 1948 to 1967 total real gross product for New Jersey increased by 113 percent compared to 108 percent for the nation. The comparative growth experience of New Jersey and the United States, as measured by current and real gross product, is depicted year by year on Chart 1, page 78.

New Jersey's favorable long-term experience for total gross product is not matched by all industrial sectors. In dollars of current purchasing power, gross product in manufacturing, New Jersey's largest industry group, grew more slowly than the corresponding national sector—from 1948 to 1967 by 173 percent against 201 percent for the nation. By contrast, the services, trade, and transportation increased more in New Jersey than in the nation.

As a result of diverging trends among sectors, the relative importance of major sectors changed markedly, both in the state and nation. Table 3 shows that the GSP data for New Jersey reflect the major compositional

⁹ G. Bry, C. Boschan, and R. Kilgore, *A Monthly Index of Manufacturing Production in New Jersey*, Bureau of Economic Research, Rutgers, The State University, 1963, pp. 8-13 and 51-55.

shifts frequently observed in GNP data—the decline of the relative importance of agriculture, mining, and manufacturing and the rise of government, services, and finance.

Our estimates of GSP originating in New Jersey establishments also permit some observations on shorter-term developments. The relative amplitudes of cyclical fluctuations were noticeably larger in agriculture, contract construction, mining, and manufacturing than in the other industrial sectors—in New Jersey as well as in the nation. The cyclical characteristics of the state sector products are broadly similar to those of the corresponding national sector products. It should be noted, however, that this observation is based on annual, and thus cyclically insensitive, data and that the application of national relationships to state estimators tends to reinforce cyclical similarities. The finding of broad similarity in the movements in state and nation is confirmed by estimates of recent trends. From 1961 to 1967 GSP for New Jersey rose by 150 percent as compared with a rise of 151 percent for GNP. The increases of individual sectors are not, of course, that close in state and nation.

All preceding findings were based on gross product originating in New Jersey establishments, as presented in Panel 1 of Table 1. Gross product generated by New Jersey residents can be found in Panel 2. These estimates are quite close to those derived by Steve Roberts, which were also based on residence. The percentage differential between estimates on establishment and on a residence basis,¹⁰ is shown in Panel 3. This differential reflects the “situs” effect. In New Jersey this ratio has always been positive for all sectors reflecting the prevailing commutation patterns. During the post-war period total gross product generated by New Jersey residents was always between 10 percent and 11.5 percent above that originating in New Jersey establishments. There exists a mild tendency for the percentage differential to diminish over time, but the measures are so approximate that it would be hazardous to ascribe any significance to this trend. New Jersey’s largest sector, manufacturing, has shown a slightly stronger change in the effects of commutation. The differential declined rather systematically from a high of 11.8 percent in 1949 to a low of 9.9 percent in 1967. A strong situs effect can be observed in New Jersey’s finance sector. A differential of about 20 percent between the two GSP estimates reflects the fact that many New Jersey residents work in the Wall Street area of New York City. New Jersey’s second largest industry, trade, also showed a comparatively large situs differential (13 percent to 14 percent) which we cannot explain satisfactorily.

The sector in which the situs differential was largest and decreased most was mining. In 1948 it was 74 percent; it declined to 25 percent in

¹⁰ This differential was computed as (GSP on residence basis minus GSP on establishment basis) as percent of GSP on establishment basis.

1967. This large differential and its change can be explained by the extremely small size of the mining sector and by the proximity of some of Pennsylvania's mining areas. Employment changes affecting a few hundred miners residing in New Jersey could account for the observed effect. In two sectors, government and other, the situs effect was not estimated. The same is true for agriculture before 1958.

GSP Forecasting for New Jersey

It was pointed out as one of the advantages of gross state product estimates that the total and its components can conveniently be related to the corresponding sectors of GNP. While this feature is valuable for comparative analysis of historical data, unfortunately, it cannot be readily exploited for sector forecasting. The reason is that, typically, GNP forecasts are articulated by expenditure sectors (government, business, consumers, net exports) and not by industrial sectors, as is needed for our GSP estimates. At present there exists no readily available source of annual GNP forecasts broken down by major industrial sector.

Despite this handicap, we prepared estimates of GSP and its major industrial components for 1968 as well as forecasts for 1969.¹¹ This was done as a rough approximation, by using historical relationships between our estimates of New Jersey GSP and GNP, and a cautious extrapolation of the changing percentage composition of GSP in New Jersey over the last 20 years. Time series of sector shares for each of ten sectors were constructed. The average yearly percentage change of each of these shares was applied to the 1967 share to provide estimates for 1968. The process was repeated to obtain 1969 values.

Estimates of GSP and its sector components for 1968 were based on a GNP figure of \$860.7-billion and on a rough extrapolation of recent trends in the ratio of GSP to GNP. This yields a value for New Jersey GSP of approximately \$33.1-billion. The national level of gross product was forecast to be \$915-billion in 1969. In this estimate, it was assumed that the relationship between GSP and GNP would not change from 1968 to 1969. This resulted in a GSP estimate for New Jersey of \$35.2 billion. The corresponding sector estimates are included in the first panel of Table 1.

Alternative assumptions about GNP in 1969 can readily be translated into levels of GSP and its components as long as we assume the sector structure to be unaffected. For example, a change of \$10-billion from the

¹¹ The article was completed in March 1969. At this time, national figures of GNP for 1968 were available. However, the industrial detail on income, which is an important ingredient of our GSP estimates, will not be published until August.

forecast GNP value of \$915-billion in 1969 would affect our GSP forecast by about \$.32-billion. This simple estimate would not be satisfactory if any unusual circumstances were to invalidate the application of the measured historical relationships. Such circumstances would, of course, also affect the sector shares.

Conclusions

We have demonstrated that gross state product for New Jersey can be constructed for the state as a whole and for its major industrial sectors. Estimates were provided on an establishment basis as well as on a residence basis; the difference between these estimates yields rough measures of the effect of commutation on GSP available for spending as compared to GSP originating in the state. The GSP estimates lend themselves to the analysis of trends, structural changes, and short term fluctuations. Gross state product is particularly suitable for forecasting purposes since it can readily be related to alternative assumptions on GNP—the variable selected as a key measure by most forecasters.

Our estimates of gross state product are rough and should serve mainly as a point of departure. The assumptions should be tested, the data base improved, and the methods refined. We expect that gross state product accounting will become a valuable tool for the analysis and forecasting of economic conditions in New Jersey and in other states.

Table 1

ESTIMATED GROSS STATE PRODUCT IN NEW JERSEY, 1948-69
 GROSS STATE PRODUCT, ESTABLISHMENT BASIS
 (Millions of Current Dollars)

<i>Year</i>	<i>Farms</i>	<i>Mining</i>	<i>Construction</i>	<i>Manufacturing</i>	<i>Trade</i>	<i>Finance</i>	<i>Transportation</i>	<i>Services</i>	<i>Government</i>	<i>Other</i>	<i>Total</i>
1948	166	33	433	3945	1573	955	818	847	594	30	9392
1949	187	35	442	3777	1588	1045	824	868	665	32	9462
1950	189	40	498	4348	1688	1151	902	947	701	40	10503
1951	230	49	625	5150	1861	1268	1032	1044	899	44	12201
1952	216	50	617	5428	1962	1365	1109	1106	1062	44	12959
1953	238	56	597	5759	2026	1511	1187	1184	1161	47	13766
1954	200	57	684	5495	2125	1681	1212	1225	1176	57	13910
73 1955	191	63	731	6076	2288	1781	1330	1364	1208	66	15098
1956	233	73	802	6442	2389	1879	1439	1480	1264	79	16080
1957	190	77	823	6674	2591	2097	1538	1626	1380	82	17077
1958	206	68	772	6308	2678	2229	1622	1661	1516	73	17132
1959	180	68	857	7105	2905	2362	1725	1844	1599	83	18728
1960	200	69	885	7313	3024	2482	1827	1970	1680	91	19542
1961	189	67	961	7432	3101	2570	1981	2111	1821	111	20343
1962	175	79	1031	8116	3352	2725	2121	2316	1922	132	21967
1963	160	84	1076	8399	3542	2899	2238	2460	2088	133	23081
1964	149	84	1176	8869	3808	3094	2352	2634	2233	147	24547
1965	183	85	1278	9738	4036	3308	2545	2838	2408	164	26581
1966	182	86	1349	10469	4418	3572	2769	3124	2685	168	28822
1967	166	75	1460	10740	4779	3736	2934	3396	2972	178	30445
1968 E	171	80	1592	11567	5176	4102	3205	3731	3308	205	33137
1969 F	171	83	1695	12164	5474	4399	3419	4004	3595	225	35227

Table 1—Continued
ESTIMATED GROSS STATE PRODUCT IN NEW JERSEY, 1948-67
GROSS STATE PRODUCT, RESIDENCE BASIS
(Millions of Current Dollars)

<i>Year</i>	<i>Farms</i>	<i>Mining</i>	<i>Construction</i>	<i>Manufacturing</i>	<i>Trade</i>	<i>Finance</i>	<i>Transportation</i>	<i>Services</i>	<i>Government</i>	<i>Other</i>	<i>Total</i>
1948	166	57	472	4384	1795	1148	894	913	594	30	10452
1949	187	57	484	4221	1819	1254	907	939	665	32	10565
1950	189	64	547	4844	1938	1370	994	1020	701	40	11707
1951	230	75	680	5715	2126	1510	1134	1125	899	44	13537
1952	216	74	672	6011	2231	1624	1219	1192	1062	44	14345
1953	238	80	651	6390	2307	1790	1307	1276	1161	47	15247
1954	200	77	748	6105	2417	1988	1338	1322	1176	57	15427
1955	191	84	800	6742	2602	2106	1470	1468	1208	66	16737
1956	233	95	879	7139	2727	2219	1590	1594	1264	79	17818
1957	190	98	906	7395	2949	2462	1698	1750	1380	82	18908
1958	208	87	854	6990	3047	2633	1783	1793	1516	73	18983
1959	182	86	946	7863	3300	2797	1897	1986	1599	83	20739
1960	203	86	978	8091	3441	2943	2013	2121	1680	91	21646
1961	191	83	1056	8209	3530	3072	2178	2270	1821	111	22522
1962	177	95	1139	8948	3808	3260	2328	2486	1922	132	24295
1963	163	101	1186	9254	4021	3455	2459	2640	2088	133	25501
1964	152	101	1291	9772	4323	3687	2589	2832	2233	147	27126
1965	186	102	1393	10706	4584	3928	2797	3050	2408	164	29319
1966	186	104	1474	11508	5003	4251	3042	3356	2685	168	31777
1967	171	94	1592	11804	5399	4478	3227	3647	2972	178	33570

Table 1—Continued
ESTIMATED GROSS STATE PRODUCT IN NEW JERSEY, 1948-67
GROSS STATE PRODUCT, SITUS DIFFERENTIAL *
(Millions of Current Dollars)

<i>Year</i>	<i>Farms</i>	<i>Mining</i>	<i>Construction</i>	<i>Manufacturing</i>	<i>Trade</i>	<i>Finance</i>	<i>Transportation</i>	<i>Services</i>	<i>Government</i>	<i>Other</i>	<i>Total</i>
1948		73.5	9.0	11.1	14.1	20.2	9.3	7.8			11.2
1949		64.2	9.6	11.8	14.5	20.0	10.1	8.2			11.6
1950		61.2	9.8	11.4	14.8	19.0	10.2	7.8			11.4
1951		53.1	8.8	11.0	14.3	19.1	9.9	7.8			10.9
1952		46.5	8.9	10.8	13.7	19.0	10.0	7.8			10.6
1953		41.3	9.1	11.0	13.9	18.5	10.1	7.7			10.7
1954		35.7	9.4	11.1	13.8	18.2	10.4	7.9			10.9
1955		33.0	9.4	11.0	13.7	18.2	10.5	7.6			10.8
1956		29.8	9.6	10.8	14.1	18.1	10.5	7.7			10.8
1957		27.5	10.1	10.8	13.8	17.4	10.4	7.6			10.7
1958	1.0	26.6	10.7	10.8	13.8	18.2	9.9	7.9			10.8
1959	1.2	25.3	10.5	10.7	13.6	18.4	10.0	7.7			10.7
1960	1.2	24.5	10.6	10.6	13.8	18.6	10.1	7.7			10.7
1961	1.3	23.8	9.9	10.5	13.8	19.6	10.0	7.6			10.7
1962	1.6	20.6	10.5	10.3	13.6	19.6	9.8	7.3			10.5
1963	1.9	19.5	10.2	10.2	13.5	19.2	9.9	7.3			10.4
1964	2.2	20.3	9.7	10.2	13.5	19.1	10.1	7.5			10.5
1965	1.9	20.7	9.0	9.9	13.6	18.7	9.9	7.5			10.2
1966	2.1	21.8	9.2	9.9	13.2	19.0	9.9	7.4			10.2
1967	2.7	24.9	9.0	9.9	13.0	19.9	10.0	7.4			11.2

E=Estimate.

F=Forecast.

* (GSP on residence basis minus GSP on establishment basis) as percent of GSP on establishment basis.

Table 2
ESTIMATED REAL GROSS STATE PRODUCT IN NEW JERSEY,
ESTABLISHMENT BASIS 1948-67
(Millions of 1958 Dollars)

<i>Year</i>	<i>Farms</i>	<i>Construction</i>	<i>Manufacturing</i>	<i>Trade</i>	<i>Finance</i>	<i>Transportation</i>	<i>Services</i>	<i>Government</i>	<i>Other</i>	<i>Total</i>
1948	139	545	5086	988	1367	1910	1216	976	52	12278
1949	186	580	4768	950	1426	1943	1216	1030	95	12194
1950	185	635	5474	1013	1537	2112	1289	1062	109	13418
1951	188	759	6069	1132	1609	2169	1350	1294	123	14692
1952	189	697	6261	1161	1650	2250	1363	1428	137	15135
1953	237	680	6612	1212	1728	2342	1398	1507	150	15865
1954	208	790	6184	1272	1873	2427	1399	1473	147	15773
1955	213	845	6720	1334	1951	2667	1511	1440	153	16834
1956	261	874	6813	1374	2011	2773	1570	1435	135	17245
1957	208	831	6837	1450	2178	2873	1666	1478	139	17658
1958	206	772	6308	1448	2229	3001	1661	1516	174	17313
1959	193	845	6995	1534	2284	3204	1781	1529	158	18521
1960	213	846	7136	1611	2357	3298	1844	1539	165	19008
1961	200	879	7236	1640	2411	3512	1927	1617	185	19606
1962	180	898	7901	1768	2546	3763	2068	1644	230	20998
1963	167	893	8167	1891	2666	3927	2109	1706	225	21750
1964	158	955	8545	1986	2795	4147	2170	1759	228	22742
1965	180	951	9345	2129	2940	4415	2278	1819	210	24266
1966	161	946	9878	2330	3093	4736	2390	1944	233	25712
1967	161	952	9874	2509	3149	4788	2481	2082	206	26213

Price adjustment carried through by GNP sector deflator.

Table 3
SECTOR GROSS PRODUCT AS PERCENTAGE OF TOTAL GROSS PRODUCT,
ESTABLISHMENT BASIS, IN NEW JERSEY AND IN THE
UNITED STATES, 1948 AND 1967

Sector	New Jersey		United States	
	1948	1967	1948	1967
Agriculture	1.77	.55	9.32	3.32
Mining .....	.35	.25	3.61	1.81
Construction	4.60	4.80	4.35	4.58
Manufacturing	42.00	35.29	29.00	28.44
Trade	16.74	15.70	18.79	16.40
Finance	10.17	12.27	9.90	13.54
Transportation	8.70	9.60	9.00	8.81
Services	9.01	11.16	8.62	10.86
Government	6.32	9.76	7.84	12.09
Other .....	.32	.59	.39	.58
Total	100.00	100.00	100.00	100.00

Percentages are based on GSP in current dollars.
Figures may not sum to total because of rounding.

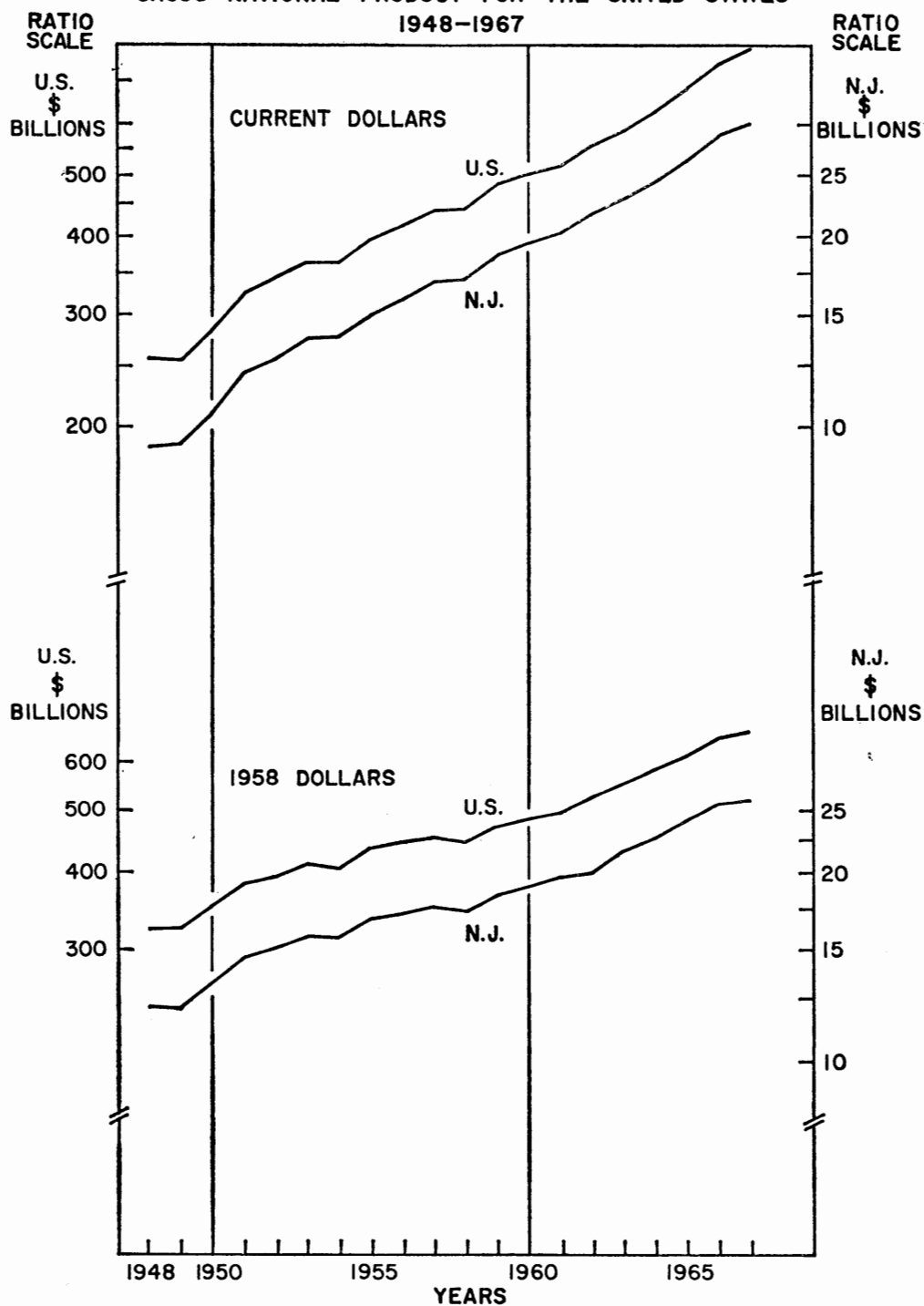
Table 4
GROSS STATE PRODUCT IN NEW JERSEY AND GROSS NATIONAL PRODUCT
IN THE UNITED STATES, 1948 AND 1967

Sector	New Jersey			United States		
	1948	1967	1948-1967 Change (Percent)	1948	1967	1948-1967 Change (Percent)
	\$ Billions			\$ Billions		
Agriculture .....	.166	.166	0	24.00	26.20	+ 9
Mining .....	.033	.075	+129	9.30	14.30	+ 54
Construction .....	.433	1.461	+228	11.20	36.20	+244
Manufacturing	3.945	10.740	+173	74.70	224.60	+201
Trade	1.573	4.779	+204	48.40	129.50	+168
Finance .....	.955	3.736	+292	25.50	106.90	+319
Transportation .....	.818	2.934	+258	23.20	69.60	+200
Services .....	.847	3.396	+300	22.20	85.80	+286
Government .....	.594	2.972	+403	20.20	95.50	+372
Other .....	.030	.178	+486	1.00	4.60	+360
Total	9.393	30.436	+225	257.60	789.70	+206

Source for U. S. data: *Survey of Current Business*.

CHART I

GROSS STATE PRODUCT FOR NEW JERSEY AND
GROSS NATIONAL PRODUCT FOR THE UNITED STATES
1948-1967



EMPLOYMENT TRENDS IN NEW JERSEY'S INDUSTRIES AND THEIR IMPLICATIONS FOR INDUSTRIAL STRATEGY*

General

THE revolutionary technological and socio-economic changes which characterize our society are leading to widely divergent industrial growth trends. The consequent shifts in the industrial composition of product and service outputs imply marked changes in employment and other factor inputs.

The most important divergence occurs between trends in the goods-producing industrial sector and the service sector.¹ Real gross national product generated in the industrial sector increased by about 90 percent between 1950 and 1968; the comparable increase in the service sector is about 115 percent. This differential growth led to the continuation of the

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¹ For present purposes, the industrial sector is defined as comprising manufacturing, construction, mining, transportation, and public utilities, and miscellaneous. The service sector covers wholesale and retail trade, finance, insurance, real estate, services proper, and government. New Jersey data in all instances are not based on 1968 benchmark. See page 64.

long-term trend toward increases in the relative importance of the service industries. These industries are now responsible for more than half of total GNP, a fact which induces many observers to characterize the United States economy as a "service economy."²

Labor inputs exhibit a still more pronounced diversity between sector growth rates. Between 1950 and 1968, employment increased only about 25 percent in the industrial sector but rose by over 75 percent or three times as much in the service sector. These growth measures are lower but more sharply differentiated than those describing output. The reason for both distinctions is found in productivity changes. With rising labor productivity, employment is bound to grow less steeply than output; and in view of the sharper rises of productivity in the manufacturing than in the service sector, the more slowly growing manufacturing output can be produced by a still more slowly growing workforce. Some of the economic consequences of these differential input, output, and productivity developments are considered elsewhere in this report.³ We are mainly concerned with the experiences of New Jersey's industries during these years of rapid economic transformation and with the implications of these experiences for the state's industrial prospects and policies.

We shall base this investigation on trends in payroll employment. The choice of employment as a basis of analysis has advantages because of the social importance of labor input and because of the abundance of the available information. Employment analysis permits us to identify industrial sectors and individual industries which experience strong and weak growth, or even decline. Comparisons of New Jersey, neighboring states, and the nation may help to distinguish among local, regional, and nationwide influences in New Jersey's employment experience. Furthermore, the rich industrial and geographic detail of the employment data published by the Bureau of Labor Statistics and the cooperating State Labor Departments permits us to gear employment analysis and employment policies both to industrial and to local labor market problems.

We shall survey major changes in employment and in the employment structure, by broad industrial segments and by major manufacturing industries.

Employment, Major Industry Groups

In New Jersey, total nonagricultural payroll employment⁴ rose by 47.3 percent (about 50 percent if 1968 benchmark adjustment is used) between

² See Victor Fuchs, *The Service Economy*, National Bureau of Economic Research, 1968.

³ See especially the contributions dealing with government, finance, and education.

⁴ Payroll employment consists of wage and salary earners carried on the payrolls of companies, whether they are actually working or not.

the years 1950 and 1968 compared with a rise of 50.7 percent for the nation as a whole. The fact that New Jersey shows about the same growth as the nation should be regarded as an achievement, in view of the westward shift of population and industry. The industrially younger western and southern regions, and with them the national averages, might well be expected to show more vigorous growth than the industrially more mature eastern and mid-western regions. It should not be assumed, of course, that the growth experience of individual states is determined by the broad sweep of regional developments. Industry mix, locational advantages, government policies, corporate initiative, and other factors will differentiate any state's growth from that of its region. This must be kept in mind if we are to avoid an overly simple deterministic view of state growth.

Employment trends in major industry groups can be studied on the basis of information provided in Table 1 and Chart 1. New Jersey's employment grows considerably more slowly than that in the nation in manufacturing, and in finance, insurance, and real estate. These developments should probably be understood in terms of the broad interregional shifts of population. Manufacturing follows those shifts which provide both labor and markets, and also stimulates these shifts by offering employment opportunities and high wages. Finance, insurance, and real estate are largely area-bound services catering to business and non-business customers in the new regions. There are some industry groups, on the other hand, whose employment growth in New Jersey substantially outpaced that in the nation. Trade increased by 80.2 percent in New Jersey compared to 50.4 percent in the U. S., and transportation and public utilities increased by 22 percent compared to the national figure of 8 percent. These experiences can be best understood in local terms, specifically by reference to northern New Jersey's relation to the metropolis. The rapid development of trade, and of transportation and public utilities, reflects the trend toward suburbanization—the transformation of parts of northern New Jersey into the living quarters and shopping centers for an increasing number of persons working in the center of the metropolitan area. These service industries are also stimulated by the development of the Jersey seashore as a major vacation area and by the construction of roads and bridges that facilitate the movements of people and goods within the state and through the state.

New Jersey's employment structure by major industry groups and its changes between 1958 and 1968 can be compared with that of the U. S. on the basis of the last two columns of Table 1. The cumulative percentage distribution of employment in New Jersey and the U. S., from 1950 to 1968

Table 1

GROWTH AND STRUCTURE OF NONFARM PAYROLL EMPLOYMENT, BY MAJOR INDUSTRY GROUPS, NEW JERSEY AND THE UNITED STATES, 1950 AND 1968

	1950 (000's)	1968 (000's)	1950-1968 % Change	1950 % of Total	1968 % of Total
NEW JERSEY					
Total	1,657.1	2,440.2	+47.3	100.0	100.0
Mining	4.3	2.8	-34.9	0.2	0.1
Contract Construction	81.2	114.9	+41.5	4.9	4.7
Manufacturing	756.4	861.8	+13.9	45.6	35.3
Transportation and Public Utilities	135.4	164.6	+21.6	8.2	6.8
Wholesale and Retail Trade ...	273.7	493.3	+80.2	16.5	20.2
Finance, Insurance, and Real Estate	68.3	108.3	+58.6	4.1	4.4
Services	166.8	353.6	+112.0	10.0	14.5
Government	171.0	340.9	+99.4	10.3	14.0
UNITED STATES					
Total	45,222	68,134	+50.7	100.0	100.0
Mining	901	625	-30.6	2.0	0.9
Contract Construction	2,333	3,256	+39.6	5.2	4.8
Manufacturing	15,241	19,734	+29.5	33.7	29.0
Transportation and Public Utilities	4,034	4,346	+7.7	8.9	6.4
Wholesale and Retail Trade ...	9,386	14,115	+50.4	20.8	20.8
Finance, Insurance, and Real Estate	1,919	3,357	+74.9	4.2	4.9
Services	5,384	10,504	+95.1	11.9	15.4
Government	6,026	12,198	+102.4	13.3	17.4

Sources: United States data, 1950: Employment and Earnings Statistics for the United States, 1909-68, U. S. Department of Labor, Bureau of Labor Statistics, *Bulletin No. 1312-6*. 1968: Preliminary annual estimates, based on monthly data published by BLS. Latest benchmark adjustments are for March 1967.

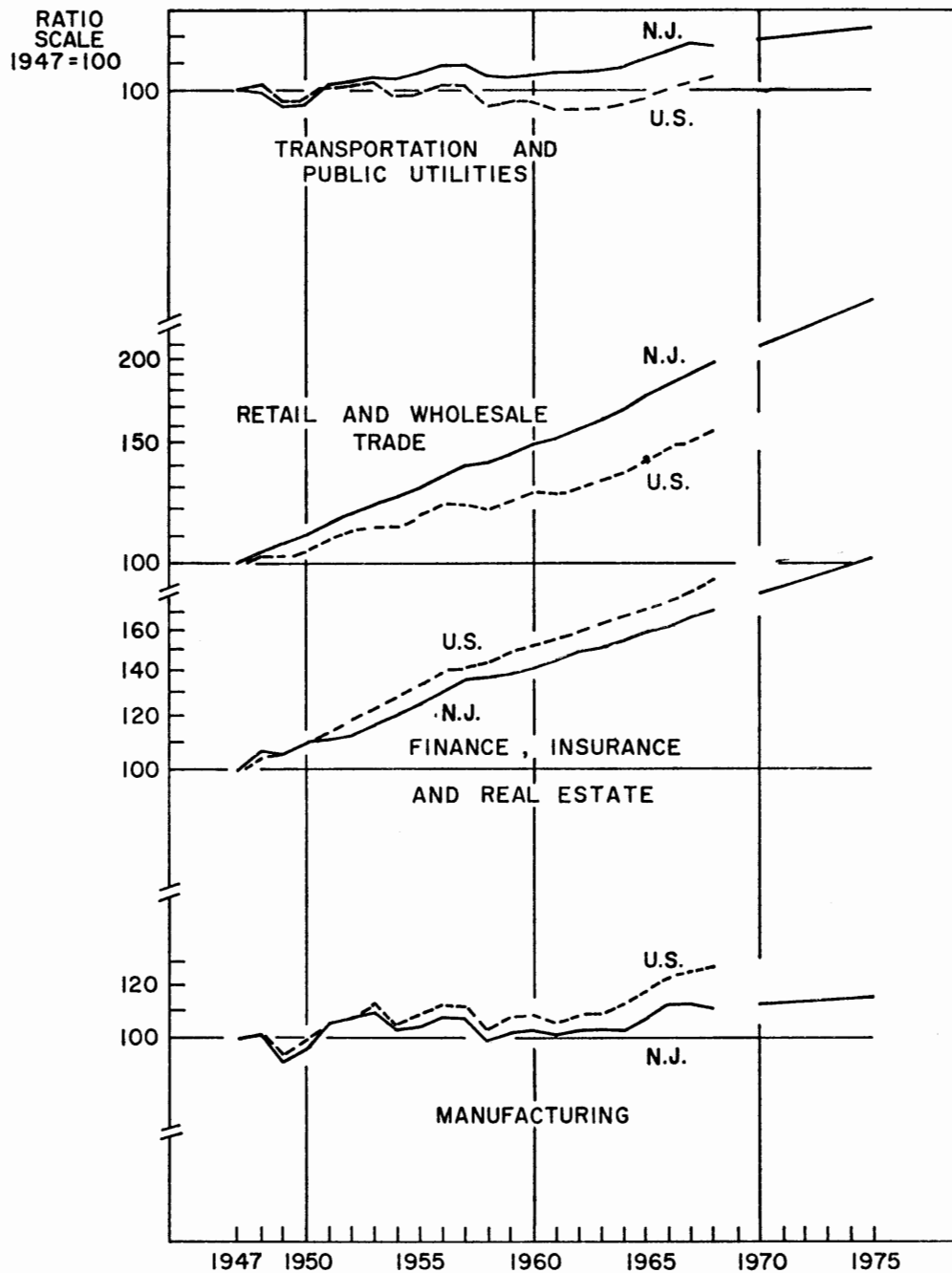
State data, 1950: Employment and Earnings Statistics for States and Areas, 1939-67, U. S. Department of Labor, Bureau of Labor Statistics, *Bulletin No. 1370-5*. 1968: Preliminary annual estimates, based on monthly data published by state labor departments. Latest benchmark adjustments are for March 1967.

and for 1970 and 1975, is depicted in Chart 2. Here the relative importance of employment in each industry group is reflected in the width of the bands which represent the various groups. It is apparent that employment in manufacturing was, is, and will be at least through 1975, the most important segment of total non-agricultural employment in the state and the nation. At the mid-century mark, manufacturing was a more important sector in New Jersey (46 percent of the total) than in the nation (34 percent). In spite of the fact that the share of manufacturing is declining more sharply in the state, it will remain larger in New Jersey (about 31 percent in 1975) than in the U. S. (about 26 percent). The present importance and the

CHART I

PAYROLL EMPLOYMENT IN SELECTED MAJOR INDUSTRY GROUPS
NEW JERSEY AND THE UNITED STATES

1950-1975



1968, PRELIMINARY; 1970 AND 1975, FORECAST

Table 2
CHANGES IN PAYROLL EMPLOYMENT IN MANUFACTURING INDUSTRIES
NEW JERSEY, NEW YORK, PENNSYLVANIA, CONNECTICUT, AND THE UNITED STATES, 1958 AND 1968

	New Jersey			N. Y.	Pa.	Conn.	U. S.
	1958 (000's)	1968 (000's)	1958-1968 % Change	1958-1968 % Change	1958-1968 % Change	1958-1968 % Change	1958-1968 % Change
TOTAL MANUFACTURING	775.4	861.8	+11.1	+0.9	+11.3	+22.3	+23.8
Durable Goods	411.9	449.7	+9.2	+11.6	+15.4	+29.0	+31.1
Nondurable Goods	363.5	412.1	+13.4	-7.0	+5.7	+6.0	+14.7
DURABLE GOODS							
Lumber and Wood	5.6	5.1	-8.9	-9.4	+4.9	+25.0	-2.4
Furniture	8.7	9.2	+5.7	-0.3	+17.2	+28.9	+31.3
Stone, Clay, and Glass	31.9	38.3	+20.1	+2.6	-3.3	+62.7	+13.4
Primary Metals	40.9	37.8	-7.6	+5.5	+3.4	-6.6	+12.7
Fabricated Metals and Ordnance	50.9	65.4	+28.5	-11.8	+11.0	+32.4	+38.7
Nonelectrical Machinery	57.0	72.5	+27.2	+18.9	+26.8	+20.2	+43.8
Electrical Machinery	115.0	124.5	+8.3	+28.9	+28.0	+46.0	+57.0
Transportation Equipment	48.7	31.3	-35.7	+10.1	+46.9	+36.5	+27.0
Instruments	27.4	35.2	+28.5	+18.9	+47.1	+31.7	+39.2
Miscellaneous	25.8	30.4	+17.8	-1.5	+2.2	+2.5	+16.7
NONDURABLE GOODS							
Food	62.9	64.4	+2.4	-17.7	-0.9	+15.6	+0.4
Tobacco	1.9	0.3	-84.2	-9.1	-26.6	*	-9.6
Textiles	33.0	28.3	-14.2	-5.1	-8.4	-11.9	+7.2
Apparel	76.7	77.0	+0.4	-14.3	+12.5	-16.3	+20.9
Paper Products	28.0	32.7	+16.8	-0.6	+17.6	+18.2	+23.8
Printing and Publishing	30.3	40.0	+32.0	+5.5	+8.1	+28.6	+21.8
Chemicals	80.8	110.4	+36.6	+2.7	+15.1	+23.6	+29.9
Petroleum	12.3	9.3	-24.4	-23.1	-22.0	*	-16.6
Rubber and Plastics	26.6	38.5	+44.7	+33.5	+61.4	+6.4	+62.0
Leather	11.1	11.2	+0.9	-14.9	-2.8	+0.0	-0.6

* included in Miscellaneous

Sources: United States data, 1958: Employment and Earnings Statistics for the United States. 1909-68, U. S. Department of Labor, Bureau of Labor Statistics, *Bulletin No. 1312-6*. 1968: Preliminary annual estimates, based on monthly data published by BLS. Latest benchmark adjustments are for March 1967.

State data, 1958: Employment and Earnings Statistics for States and Areas, 1939-67, U. S. Department of Labor, Bureau of Labor Statistics, *Bulletin No. 1370-5*. 1968: Preliminary annual estimates, based on monthly data published by state labor departments. Latest benchmark adjustments are for March 1967.

employ over 100,000 workers, employment in the tobacco industry is negligible and in lumber and wood, furniture, and petroleum it is below 10,000. Note also the large variations among employment changes: while employment in the rubber and plastics industry grew by 45 percent and in printing and publishing by 32 percent, employment in transportation equipment shrank by 36 percent and in the tiny tobacco industry by as much as 84 percent.⁵ Certainly differentiation among industry trends within manufacturing is sharper than that among the broader industry groups previously discussed.

Since large employment changes have manifold socio-economic consequences for employees, employers, providers of raw materials and providers of consumer goods, it is important to identify industries that seem to be particularly vulnerable and others that seem to develop particularly favorably—by themselves and in comparison to experiences in the nation and in neighboring states. In addition to this, we shall point out some analytical and operational requirements for the development of industrial strategies.

Chemicals, and printing and publishing are not only among New Jersey's fastest growing industries (again, measured in terms of employment) but they also grow faster in New Jersey than in the remainder of the nation and in the three neighboring states. In percentage terms, employment in New Jersey's rubber and plastics industry grew faster than in any other of its industries, though not faster than in the same industry in Pennsylvania and in the nation. However, the favorable performance of these industries over the decade as a whole should not lead to disinterest. Industries that perform well compensate for declining or slowly growing ones, and it may be easier to stimulate them than to stem declines in other industries. Current monitoring indicates that printing and publishing experienced a slowdown between 1967 and 1968, partly because of declining operations in one major firm. Actual decreases of employment in printing and publishing occurred in New York and Pennsylvania. This region-wide slow-down deserves further analysis. It is possible that benchmark adjusted information will modify our picture of these developments, for better or worse. In any case, the current experiences should alert us to the potential loss of momentum in one of New Jersey's important growth industries.

The need for current monitoring is suggested strongly by an examination of some industries whose comparative employment trends over the past decade appear rather favorable (among them stone, clay, and glass as well as miscellaneous manufacturing industries), or perhaps some of those whose performance was only fair (food, apparel), but whose experiences during

⁵ After adjustment for 1968 benchmarks, the percentage changes are 49, 38, 35, and 84 respectively.

the last two years are disturbing. In the four industries mentioned, employment declined during recent years beyond the extent that might be expected from small irregular fluctuations in the demand for and the supply of the industries' products. The declines may or may not reflect regional and national trends, and the measure of their magnitude may be modified by data revisions. However, the reasons for these reversals should be examined, both in order to determine whether they are likely to continue, and to evaluate the possibilities for remedial action.

Let us turn finally to two industries whose long-term performances are distinctly unfavorable. Table 2 shows that employment in the transportation equipment industry, which amounted to almost 50,000 in 1958, shrank to a little more than 30,000 in 1968, a decline by about 35 percent. This occurred despite marked increases in neighboring states and in the nation. The sharp divergence in employment trends really begins in 1961. The experience of the last seven years certainly requires intensive investigation. Another industry with an unfavorable employment record is the electrical machinery industry—New Jersey's largest manufacturing industry. Here we do not find any precipitous decline; in fact, employment increased by almost 10,000 or 8 percent between 1958 and 1968 (14,000 and 12 percent if 1968 benchmark adjustments are used). However, this increase is far below the increases experienced by neighboring states (ranging from +28 percent to +41 percent) and the nation (+57 percent). Again, this is a case for close investigation and, perhaps, remedial action. The experiences of both these industries are analyzed further in a separate contribution to this report, entitled, "Transportation Equipment and Electrical Machinery—Two Problem Industries in New Jersey."

Concluding Remarks and Recommendations

The preceding review did not aim to investigate the causes of differential employment trends and to suggest appropriate policies for specific fast growing or slackening industries. The main objective was to describe some experiences which indicate the need for such analysis and such strategies.

In order to assure that the required analyses are actually carried out, that their implications for remedial actions are explored, and that the conclusions of such explorations are properly implemented, we suggest the following:

1. A broad program for the current monitoring of industrial developments should be established, and administered by a state agency. In addition to systematic analysis of available employment, cost,

profit, and other data, the agency should instigate the compilation of new information if such information seems needed. The program should include prompt publication of seasonally adjusted monthly or quarterly information, in the form of tables and charts that cover a time period sufficiently long for useful observations. Comparisons should be made with corresponding activities in neighboring states and the United States. Current interpretation should be provided to highlight developments that require attention. We are aware of the fact that the Department of Labor and Industry has been engaged in some of the suggested activities, particularly in connection with the *New Jersey Economic Indicators*. However, this publication aims more at general business conditions analysis than at the monitoring of the strategic aspects of individual industries. The Department of Conservation and Economic Development has also been actively concerned with specific problems of industrial growth.

2. Analyses in depth should be carried through for each major industry group and component industry in New Jersey. Again, the analyses should include comparisons with neighboring states and with regional and industrial developments, but they should not be confined to comparative description. The task should be in the hands of a special group whose time is not taken up by competing routine work. It seems desirable that this work be performed in cooperation with the State's various universities. In fact, sophisticated economic analyses of specific industries might well be suitable subjects of master's essays or of state-sponsored research projects.
3. Continuing coordination should be maintained with the Department of Conservation and Economic Development and its Economic Development Council to stimulate current and basic industry analyses, study the results, formulate appropriate industrial development strategies, and recommend machinery for implementation. Such implementation may involve joint actions by various government departments, business representatives, organized labor, and interested members of the academic community. The initiation and development of these programs are a major concern of the Economic Policy Council and the Office of Economic Policy in the Treasury Department.

TRANSPORTATION EQUIPMENT AND ELECTRICAL MACHINERY: TWO PROBLEM INDUSTRIES IN NEW JERSEY *

THE preceding report on employment trends in New Jersey called attention to the unfavorable developments in the transportation equipment industry and the electrical machinery industry in our state, relative to the corresponding trends in New York, Pennsylvania, Connecticut, and in the nation as a whole. In this section we shall attempt to follow these developments somewhat further by tracing them to employment trends in component industries and, on occasion, even to the experiences of major firms. We shall speculate about general and specific economic causes for the observed developments. We cannot offer full explanations because our analysis is largely restricted to employment data, value added data, and rather casual bits of institutional information. Thus our interpretations should be regarded as tentative, and the entire inquiry as a first step toward a more systematic approach to industry analysis.

* Prepared by Gerhard Bry, Department of Economics, Graduate School of Business Administration, New York University. New Jersey data in all instances are not based on 1968 benchmarks. See page 64.

Transportation Equipment

The absolute and relative performance of New Jersey's transportation equipment industry is particularly weak. After a rise ending in 1953, payroll employment in this industry declined steadily and drastically. Indeed, between 1953 and 1968 it decreased by half, from 62,700 to 31,300 employees.

Comparative analysis of the industry's employment performance since 1958 can be undertaken with the aid of Chart 1. We find that up to the year 1960, New Jersey's weak performance reflected that of the nation and was similar to that of its neighbors, New York and Connecticut. However, the 1960-61 contraction hit transportation equipment in New Jersey with particular force, and since then employment has continued, with brief interruptions, to fall in our state, whereas it increased sharply in New York, Pennsylvania, Connecticut, and in the United States as a whole. For the period 1958 to 1968, employment in New Jersey's transportation equipment industry, as measured by the Bureau of Labor Statistics and the associated state agencies, declined by 36 percent while it rose in New York (+10 percent), Pennsylvania (+47 percent), Connecticut (+37 percent) and in the United States (+27 percent). Employment changes based on Census data show similarly formidable differences.

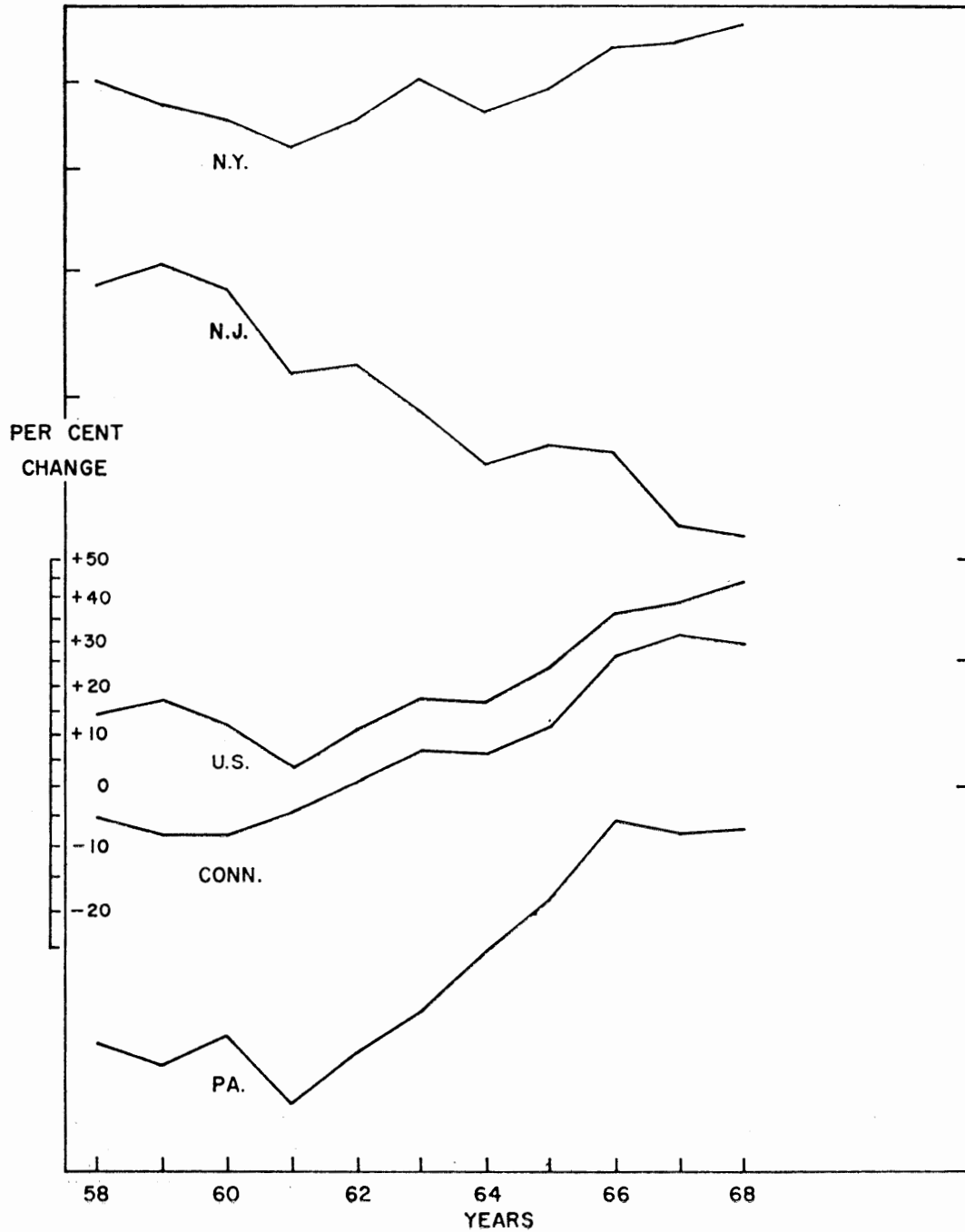
Why did New Jersey's employment drop so sharply in the face of employment increases all around it? It is conceivable that this decline, rather than reflecting weakness, was caused by labor saving made possible by large capital investment. If this were true, it would be reflected in a more favorable comparative showing of the value-added record of this industry in New Jersey. The facts, however, are otherwise. For the period 1958 to 1966 (the last year for which data are available) value added by the transportation equipment industry in New Jersey increased by only 16 percent; comparable increases in the three neighboring states varied between 106 percent and 125 percent; in the United States the increase was 91 percent. (All these measures are in current dollars and are therefore affected by price changes.) New Jersey's performance is still by far the weakest. We must search for other explanations.

Let us first establish whether the employment decline was concentrated in some sub-groups of the industry or whether it was industry-wide. In New Jersey, as well as in the nation, the major components of the transportation equipment industry—motor vehicles, aircraft, ship building, and railroad equipment—participated in the downward drift of employment during the fifties. After 1961, the component industries tended to show employment increases in the nation and the neighboring states, while New Jersey continued to show declining or virtually stable employment in the major

CHART I

PAYROLL EMPLOYMENT IN THE TRANSPORTATION EQUIPMENT INDUSTRY
NEW JERSEY, NEW YORK, PENNSYLVANIA, CONNECTICUT, AND THE UNITED STATES

1958-1968



segments of the industry. That is, both the growth in the neighboring states and the lack of growth in New Jersey were industry-wide.

Let us next examine the component industries more closely and begin with the activities depicted in Chart 2. Employment in the motor vehicle industry showed the largest divergences of changes, among states, between the years 1961 and 1963. During this period, employment in New Jersey dropped sharply while that in the neighboring states and in the country increased. What happened? The New Jersey establishments of the major automobile companies are engaged in assembly operations. Instead of participating in the industry recovery from the 1961 trough, they continued to experience virtual stability of employment for two more years. A recovery followed, but the major additions to the industry occurred elsewhere. Consequently, the employment levels of the New Jersey motor vehicle industry were much the same in 1958, 1961, and 1968. In short, the motor vehicle industry which, nationally and regionally, was and is a center of dynamic changes and employment growth, did not exhibit these features in our state—at least as far as contributions to employment increases are concerned.

In the aircraft industry, the divergences in state employment trends began in 1962. Chart 3 shows that from this year on New Jersey experienced a marked, though decelerating downward drift, in contrast with substantial net growth in the neighboring states and the United States. The increases are not difficult to understand, in view of the rapid development of commercial and, in more recent years, military aircraft. What needs study is why New Jersey's aircraft industry failed to participate in this growth. The explanation lies partially in the fact that employment in the state's most important aircraft manufacturers was practically cut in half between 1958 and 1968.

Like the employment decline in New Jersey's aircraft industry some of the increases occurring in neighboring states can be explained by the experiences of a few dominant firms—in Connecticut, for instance. Furthermore, some companies in Connecticut specialized in the building of helicopters, and thus this segment of the industry was able to respond to the large demand for such aircraft associated with military operations in Vietnam.

New Jersey's shipbuilding industry is comparatively small. Its employment declined from the end of the second world war to 1958 by about 5,000 persons, leaving an employment level of only about 13,000 persons in that year. Thereafter, as Chart 4 shows, the downward trend was precipitous with the number of jobs falling to less than 5,000 in 1968. This is

CHART 2

PAYROLL EMPLOYMENT IN THE MOTOR VEHICLE INDUSTRY
NEW JERSEY, NEW YORK, PENNSYLVANIA, AND THE UNITED STATES.
1958-1968

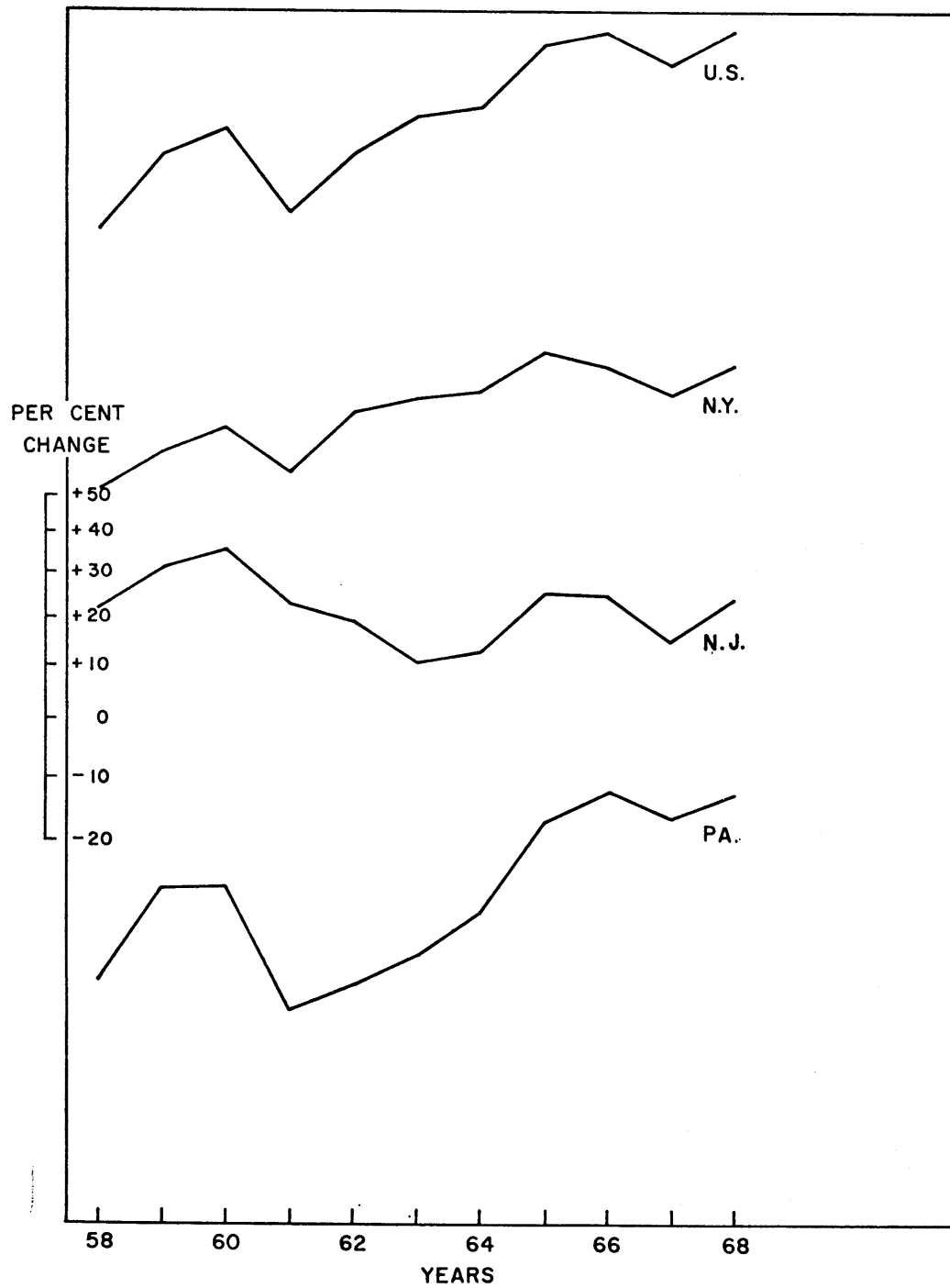


CHART 3

PAYROLL EMPLOYMENT IN THE AIRCRAFT INDUSTRY
NEW JERSEY, NEW YORK, PENNSYLVANIA, AND THE UNITED STATES
1958-1968

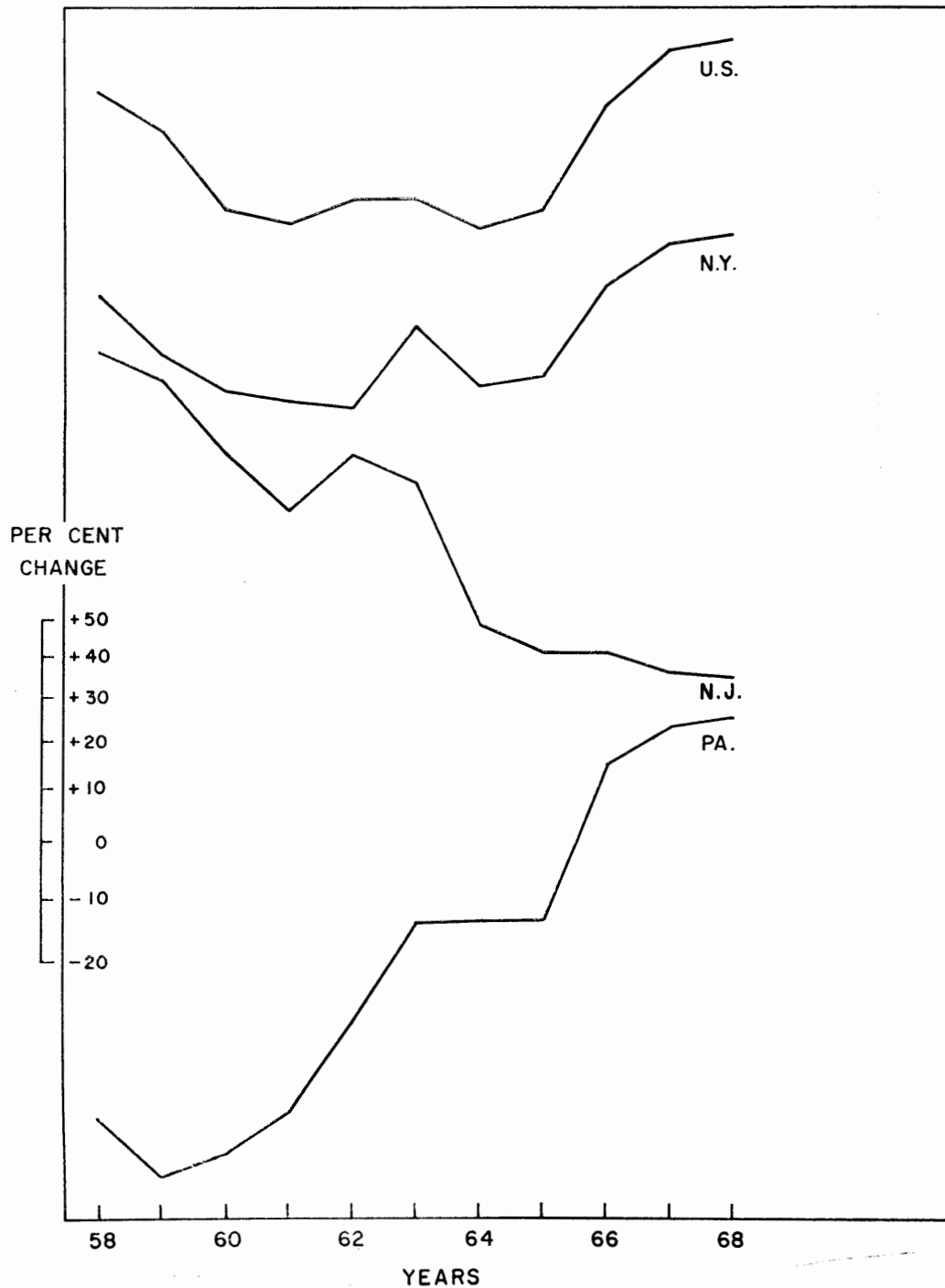
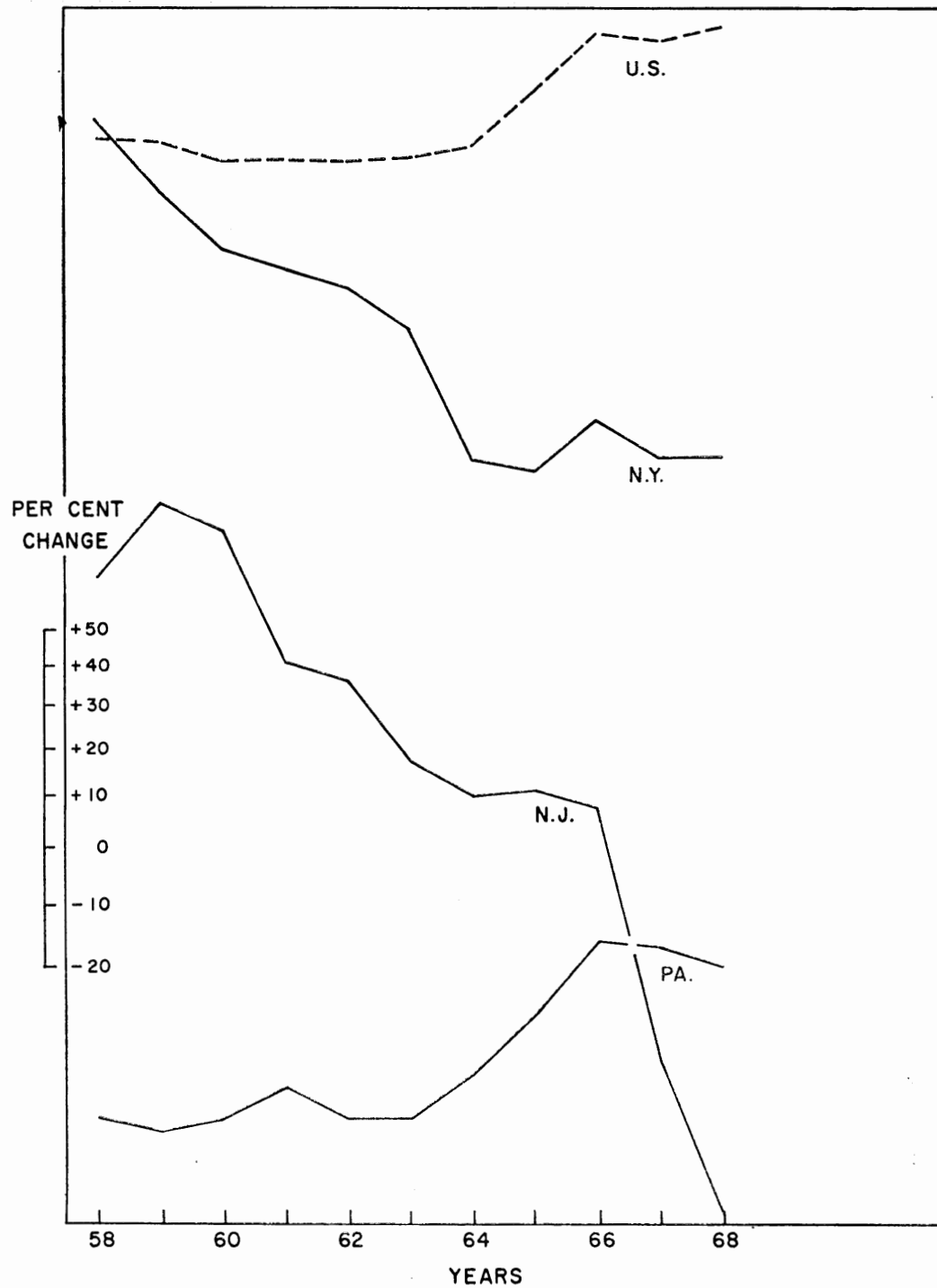


CHART 4

PAYROLL EMPLOYMENT IN THE SHIPBUILDING INDUSTRY
NEW JERSEY, NEW YORK, PENNSYLVANIA, AND THE UNITED STATES
1958-1968



in sharp contrast to the maintenance and spurt of shipbuilding activity in Pennsylvania and the nation. New Jersey's shipbuilding industry consisted largely of relatively small shipyards. Such enterprises find it difficult to survive in an environment where steeply increasing material and labor costs must be countered by modern facilities and high productivity.

Shipbuilding in New York State was beset by similar problems, with employment dwindling from 7,600 in 1958 to 4,100 in 1961. Antiquated equipment, high metropolitan wage rates, and gradual attrition of a labor pool with the required skills also explain the contraction of activity on the other side of the Hudson river. However, since 1961 the remaining yards were able to give fairly stable employment to a workforce of about 4,000 men—largely through civilian maintenance and repair work. In Connecticut, submarine contracts led to favorable employment trends in the shipbuilding industry of that state. Again, the experiences of a single firm or a small number of enterprises tend to dominate the employment picture.

Finally, there is the railroad equipment industry, which in New Jersey is extremely small. Nevertheless, the industry deserves mentioning here, since the vigorous upsurge of employment in Pennsylvania's and the nation's transportation equipment industry was supported by the expansion of the railroad sector. The virtual absence of this industry, with its boosting effect on employment, from our state must be regarded as part of the explanation for the comparative performance of our total transportation equipment industry.

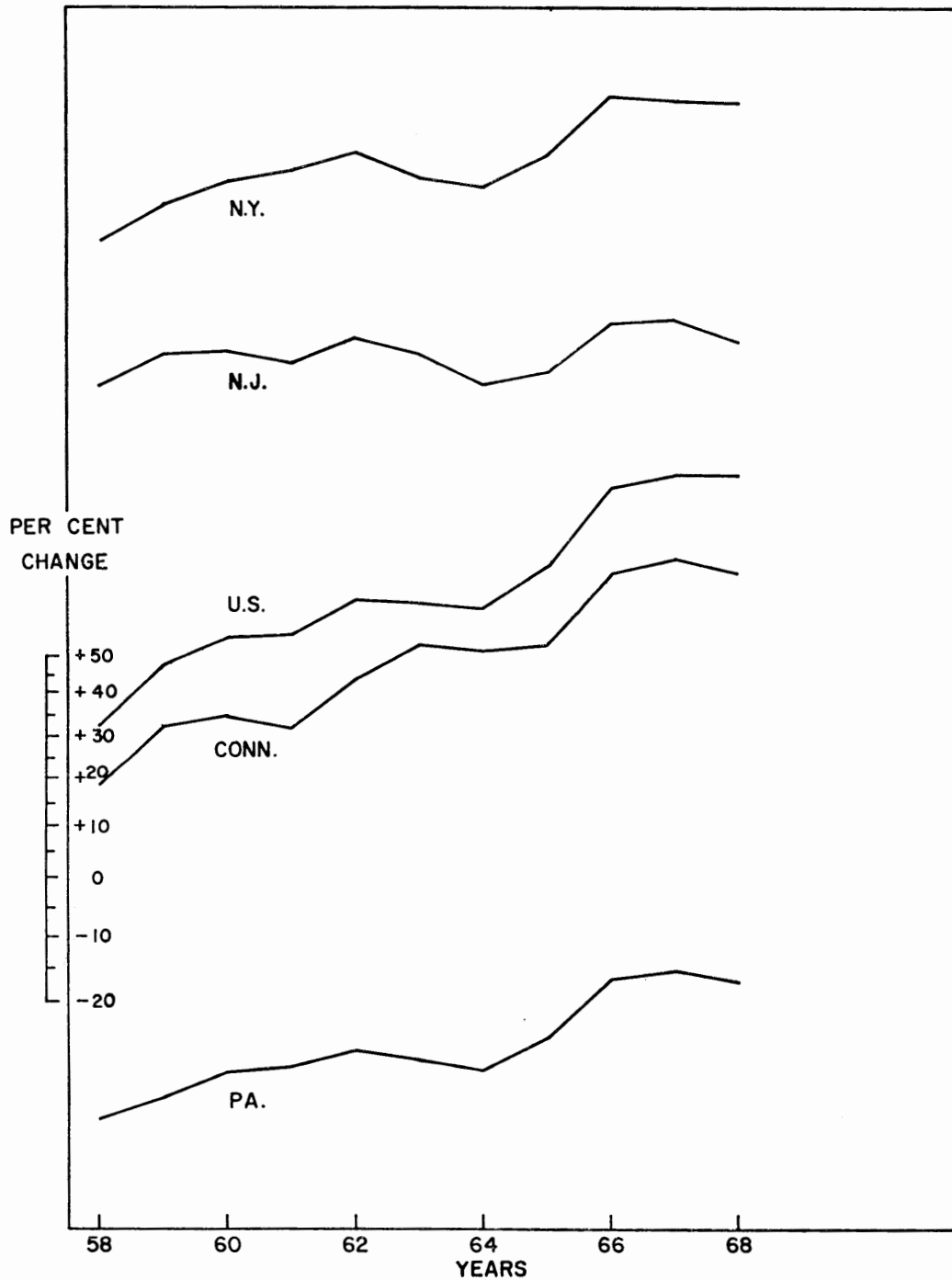
Electrical Machinery

Employment trends in the electrical machinery industry in New Jersey are of particular interest and concern. For one thing, the industry is the largest manufacturing industry in the state, with about 125,000 employees in 1968. Secondly, this industry has shown very little growth since 1958, in spite of substantial expansion in the neighboring states and in the nation. The divergent trends are depicted in Chart 5. While employment grew by only 8 percent during the past decade in New Jersey (12 percent if 1968 benchmark adjustments are used), it increased by 28 percent, 29 percent, and 46 percent in Pennsylvania, New York, and Connecticut, respectively, and by as much as 57 percent in the nation.

We must find out whether the comparatively unfavorable employment trend in New Jersey's electrical machinery can be ascribed to larger productivity increases or perhaps to changes in sub-industry mix in favor of

CHART 5

PAYROLL EMPLOYMENT IN THE ELECTRICAL MACHINERY INDUSTRY
NEW JERSEY, NEW YORK, PENNSYLVANIA, CONNECTICUT, AND THE UNITED STATES
1958-1968



high productivity component industries. Again, we turn to value-added measures for enlightenment. Between 1958 and 1966 (the last year for which value-added data are available) value added by the electrical machinery industry rose 91 percent in New Jersey, roughly doubled in New York and Pennsylvania, and increased by 107 percent in Connecticut. All these increases are below that in the United States as a whole, which amounts to 122 percent. Although New Jersey's performance is weaker than that of the neighboring states and the nation, the difference is not as pronounced as that between employment trends. Thus we have to explain two phenomena—the relatively unfavorable employment performance of New Jersey's industry and the fact that value-added comparisons present a somewhat more favorable picture.

Before starting any more detailed analysis, we must face up to a severe data problem that is rarely given full recognition. If we compare the employment data given by the Census of Manufactures and those provided by the Bureau of Labor Statistics, for the years during which this is feasible, we find substantial differences. Table 1 shows comparisons between Census and BLS data for the electrical machinery industry and some major sub-

Table 1
ALL EMPLOYEES IN THE ELECTRICAL MACHINERY INDUSTRY ACCORDING TO
BLS AND CENSUS STATISTICS, NEW JERSEY AND UNITED STATES,
1958 AND 1966

	<i>New Jersey</i>			<i>United States</i>		
	<i>1958</i>	<i>1966</i>	<i>1958-66</i>	<i>1958</i>	<i>1966</i>	<i>1958-66</i>
	<i>Thousands</i>	<i>Thousands</i>	<i>percent change</i>	<i>Thousands</i>	<i>Thousands</i>	<i>percent change</i>
<i>Electrical Machinery, Total</i>						
BLS . . .	114.9	128.8	+12.1	1249.0	1908.8	+52.8
Census .	107.7	132.0	+22.6	1140.8	1814.3	+59.0
<i>Communication Equipment</i>						
BLS . . .	41.7	45.0	+ 7.9	296.1	467.7	+58.0
Census .	35.5	55.0	+54.9	234.4	489.3	+108.7
<i>Electronic Components</i>						
BLS . . .	22.3	29.6	+32.7	178.9	388.6	+117.2
Census .	24.1	27.3	+13.3	197.9	384.5	+94.3
<i>Lighting and Wiring Devices</i>						
BLS . . .	14.2	17.3	+21.8	121.3	196.0	+61.6
Census .	12.4	15.5	+25.0	124.2	156.1	+25.7

Sources: U. S. Census of Manufactures, 1963, Vol. III; *Annual Survey of Manufactures*, 1966; BLS *Employment and Earnings Statistics for States and Areas*, 1939-67; *Employment and Earnings*, passim.

groups, in New Jersey and in the United States. Since we are mostly interested in comparative trends, let us confine our discussion to percentage changes. Note that the differences can be very marked. Employment in New Jersey's communication equipment industry changed by only +8 percent between 1958 and 1966 according to BLS figures, while it increased by 55 percent according to Census figures. In New Jersey's electronic components industry the corresponding employment changes were +33 percent (BLS) and +13 percent (Census). These impressive discrepancies create problems for research. They may be partly due to differences in classification criteria for multiproduct establishments. In principle, both the Census Bureau and the BLS classify the whole establishment by the dominant value-of-product (which could be less than half the firm's total value-of-product). However, if sufficiently detailed information is available, BLS may allocate the employment of an establishment to different industries. Thus, it can happen that the employment of one establishment is allocated to several industries, while the employment of another establishment with output of similar composition is allocated to only one industry. This may affect comparability of employment statistics among states and among industries.¹ At more detailed industry levels, another source of potential discrepancies exists: Census classifies auxiliary units, and district or central headquarters only by major industry (2-digit level), while BLS classifies by minor industry (4-digit level). Such general rules do not, of course, provide specific explanations for the marked discrepancies in electrical machinery employment. A proper explanation would have to consider the procedural effects of the general rules on the classification of all major firms in a given sub-industry. In any case, the large differences in measured behavior indicate that any thorough analysis of industry performance must include a critical examination of the basic data—a task that exceeds our present time budget. Let us emphasize, on the other hand, that in the case of electrical machinery the Census data support the observations that employment growth in the industry, and in its major subgroups, is appreciably slower in New Jersey than in the nation; that employment growth for the industry as a whole is slower in New Jersey than in New York, Pennsylvania, Connecticut, and the nation; and that the differences in performance are larger when measured by employment than by value added. Below, employment is measured by BLS data (which are more up-to-date) except where otherwise noted.

¹ In principle, both Census and BLS procedures could be detrimental to comparability over time. The Census attempts to minimize this effect, by keeping small establishments in the industry to which they belonged in the last Census year and large establishments in the industry to which they belonged in the previous year, except if the shift in major activity was "significant."

Let us turn to an examination of some major component industries. The communication equipment industry, which presently accounts for more than one-third of all employment in electrical machinery production in New Jersey, has experienced very little growth since 1958. This performance contrasts with national employment trends which show an increase of 70 percent over the period 1958-68, but it is not radically different from the performance in New York. (See Chart 6.)

Large companies dominate this industry in New Jersey. A very slow growth in employment occurs in the industry, as measured by BLS data. The considerably more favorable performance reflected in the corresponding Census data (+55 percent between 1958 and 1966) a puzzle whose solution must await more thorough investigation. Whether measured by BLS or Census data, employment in the communication equipment industry in our state was not commensurate with the surging national and international demand for this industry's products. It cannot be argued that this sluggishness was due to broad regional forces, such as concentration of industry expansion at the West Coast. While up-to-date BLS information is available only for New York and New Jersey, the following tabulation of Census data permits us to compare the employment record of four states between 1958 and 1966.

TOTAL EMPLOYEES IN THE COMMUNICATIONS EQUIPMENT INDUSTRY IN
FOUR STATES AND THE UNITED STATES, 1958 AND 1966

	1958 (number)	1966 (number)	1958-66 (% change)
New Jersey	35,543	55,022	+ 55
New York	34,845	65,612	+ 88
Pennsylvania	4,681	14,574	+211
Connecticut	2,777	7,669	+176
United States	234,411	489,335	+109

It is true that the communication equipment industry is small in Pennsylvania and Connecticut and that, therefore, the addition of a few thousand workers can lead to impressive percentage increases. It is also true, however, that the relative growth of the industry in New Jersey was the smallest among the four listed states and only half as large as the industry's growth in the United States.

The story of the electronic components industry is not substantially different. Chart 7 shows that, between 1958 and 1968, New Jersey's employment growth (+20 percent) was substantially below that of New York (94

CHART 6

PAYROLL EMPLOYMENT IN THE COMMUNICATION EQUIPMENT INDUSTRY
NEW JERSEY, NEW YORK, AND THE UNITED STATES,
1958-1968

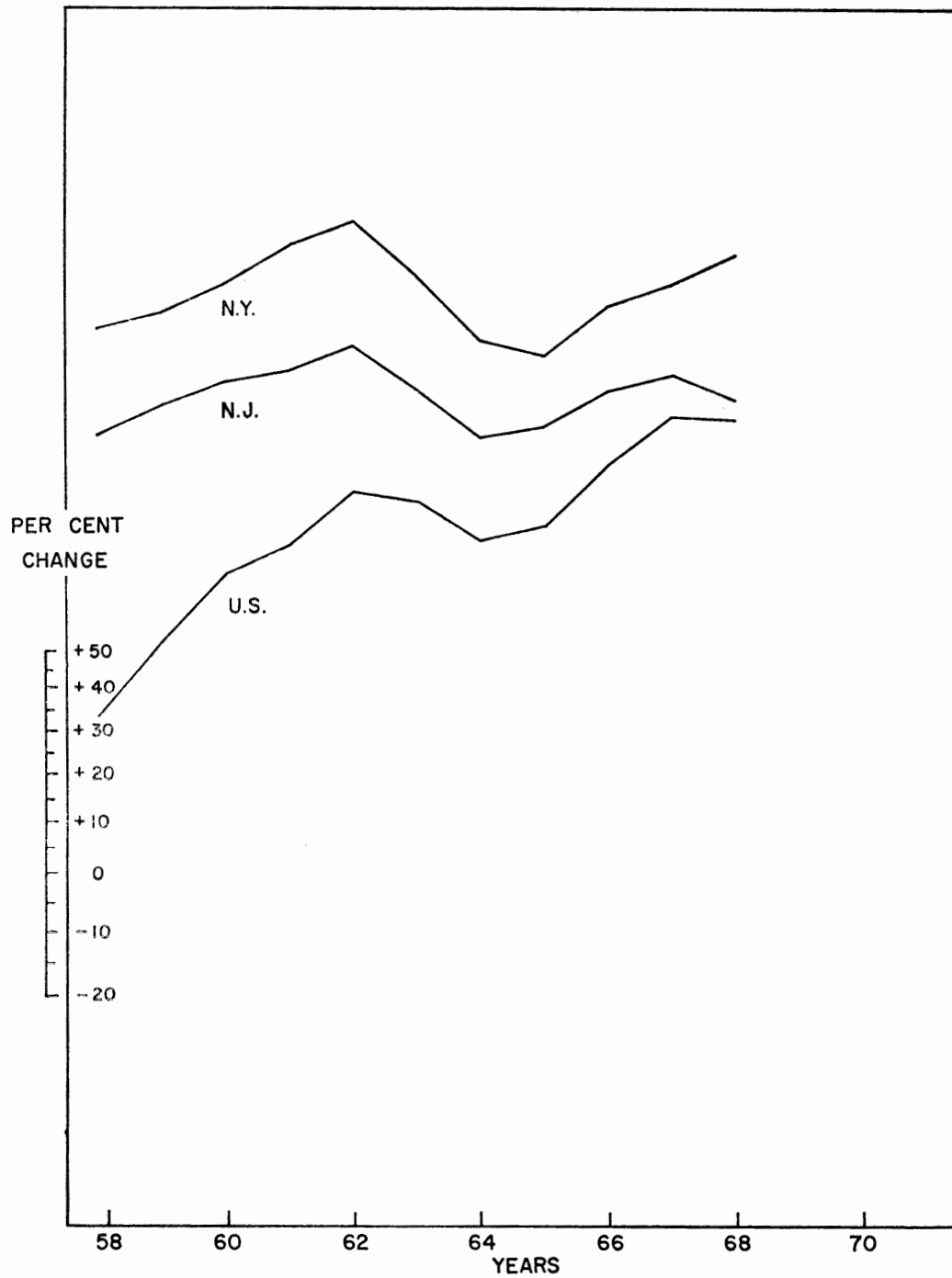
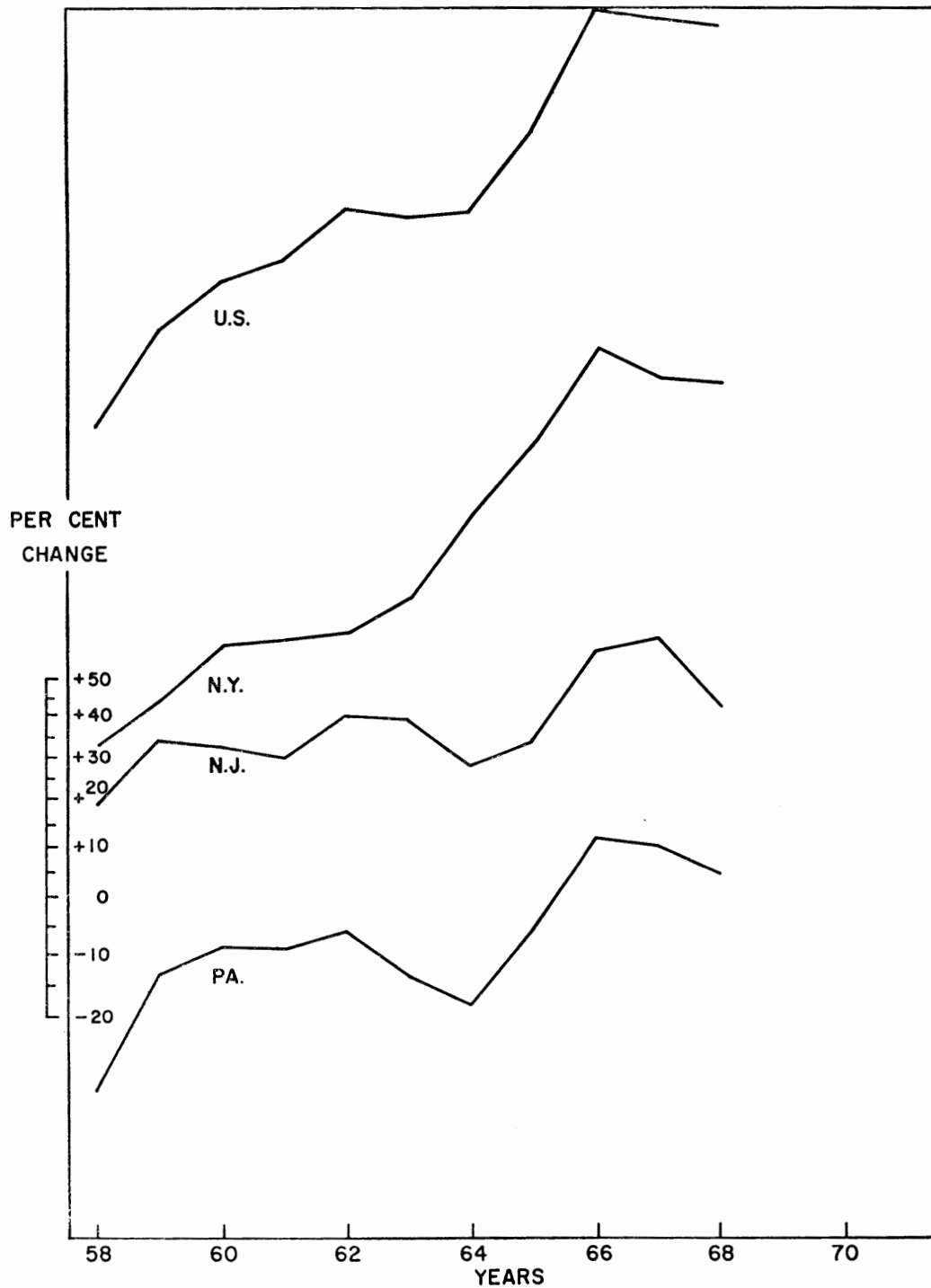


CHART 7

PAYROLL EMPLOYMENT IN THE ELECTRONIC COMPONENTS INDUSTRY
NEW JERSEY, NEW YORK, PENNSYLVANIA, AND THE UNITED STATES
1958-1968



percent), Pennsylvania (+52 percent), and the United States (+108 percent). Again, BLS data for Connecticut are not available, but comparison of Census information for the period 1958-66 shows the relatively small industry in Connecticut to jump from 4,566 to 12,349 (+170 percent)² while our industry grew from 24,093 to 27,314 (+13 percent). The electronic components industry in New Jersey consists of relatively small establishments. As far as published data permit us to judge, most of the smaller companies in this New Jersey industry showed employment growth during the past decade. Some of this gain was offset by severe reductions in employment at several larger plants. However, this is not a case in which the industry's employment experience can be explained by that of one or two dominant firms. For a variety of considerations some of New Jersey's firms preferred to expand elsewhere and few large firms chose New Jersey as their new domicile or as a location for new plants.

Lighting and wiring devices are, in terms of employment, the next largest component of New Jersey's electrical machinery production. In 1968 this industry employed about 18,000 wage and salary earners. Chart 8 depicts comparative employment trends for this sector: from 1958 to 1968 New Jersey's industry shows an expansion of about 26 percent (31 percent after 1968 benchmark adjustment), compared with 55 percent for New York, 42 percent for Pennsylvania, and almost 70 percent for the nation. For Connecticut we have to rely again on Census information which shows a small employment loss, between 1958 and 1966, as compared with a gain of about 25 percent in our state. The large New Jersey employers in this sector had fairly steady employment levels during the last decade. Lamp manufacturing being a highly automated process, employment stability does not imply absence of growth in output.

The goal of this paper is to initiate a process of thorough industry analysis rather than to deliver the results of such an effort. Let us, therefore, merely state that the remaining segments—electrical, and electrical industrial apparatus—also exhibit employment gains which are below those of the corresponding industries in neighboring states and in the nation. This means that the observed comparatively sluggish employment growth of New Jersey's electrical machinery industry extends to all of its component industries.

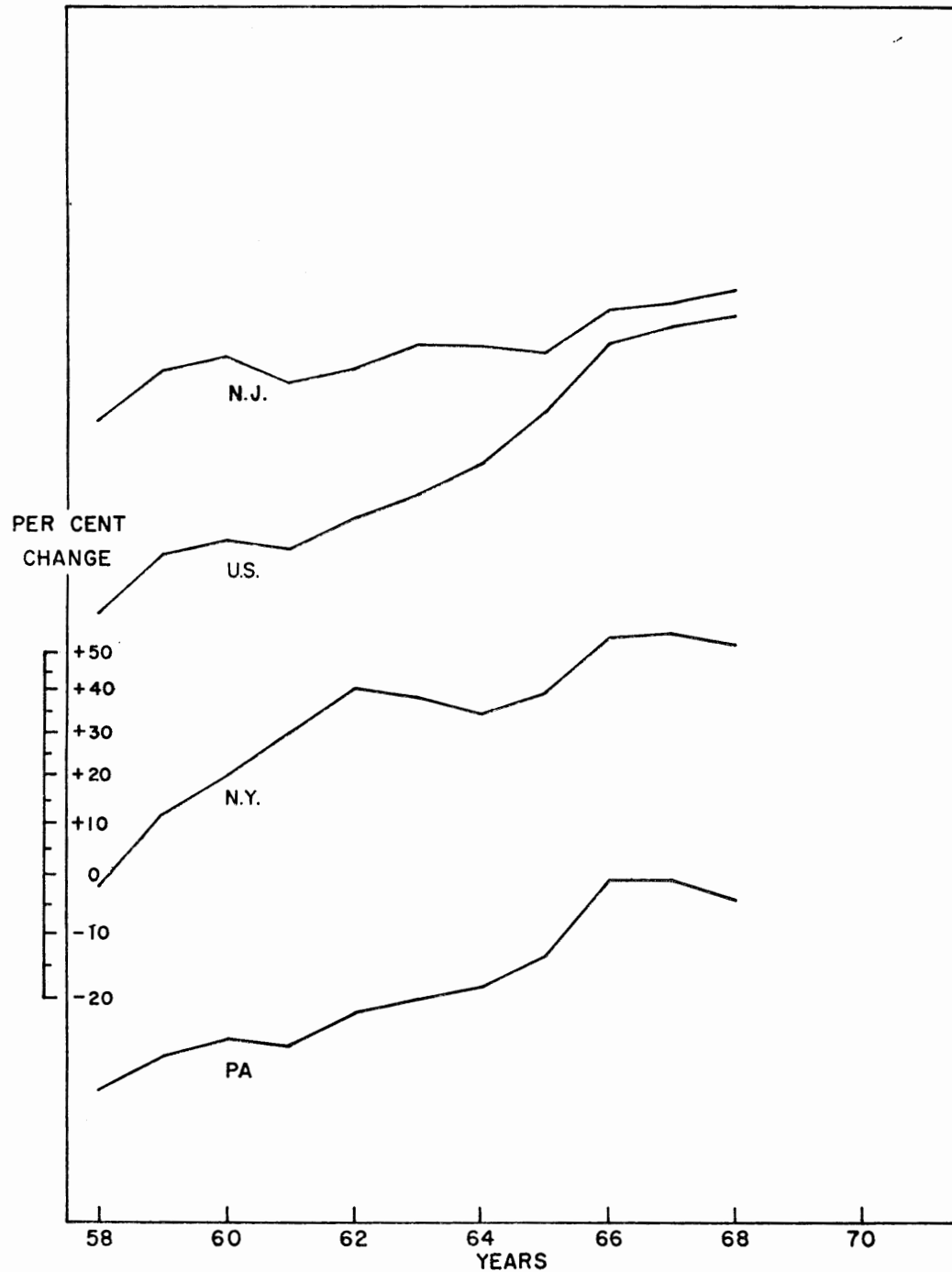
Concluding Comments

Exploratory analysis shows that, during the past decade, employment in our state's transportation equipment industry experienced substantial declines and that employment in its electrical machinery industry experienced

² Connecticut's rapid employment growth is largely due to the opening of new firms and the expansion of existing ones, but it is also affected by changes in codification.

CHART 8

PAYROLL EMPLOYMENT IN THE ELECTRIC LIGHTING & WIRING EQUIPMENT INDUSTRY
NEW JERSEY, NEW YORK, PENNSYLVANIA, AND THE UNITED STATES
1958-1968



slight growth. This occurred in spite of substantial increases of the corresponding activities in the nation. The unfavorable showing cannot be attributed to broad regional circumstances, since employment in the neighboring states fared substantially better. The comparatively poor record of both industries extended to their major components (3-digit industries). While this record may sometimes be attributed to the indifferent performance of many relatively small firms, it could frequently be traced to the particular circumstances and policies of a few dominant enterprises. These observations raise a number of questions, some of which transcend the concerns of the two industries analyzed.

Are there specific adverse circumstances which led to inferior employment performances in New Jersey's transportation equipment industry, electrical equipment industry, and their major components? If so, what are they, and how can they be altered or compensated for?

We are, of course, aware of the fact that some of these questions are not new, and that public and private agencies seek to find answers. Our goal must be to strengthen the impact of these and other activities sufficiently so that they can raise the industrial prospects, and with them the employment opportunities, in our state.

V

REVIEW OF 1968 AND FORECASTS FOR 1969*

The New Jersey Economy in 1968

FOR the economy of New Jersey, the year 1968 stacks up well against the preceding year. This is true, whether we look at employment, gross state product, income, or personal and business spending. Table 1, giving actual data for 1967 and 1968, as well as forecasts for 1969, illustrates this progress.

Not only do average annual levels of New Jersey economic activity compare favorably with those of the preceding year, but—perhaps more importantly—the general direction of economic events during the year was

* Prepared by William C. Freund, Vice President and Economist of the New York Stock Exchange, and Gerhard Bry, Professor of Economics at the Graduate School of Business Administration, New York University. Some of this material was released to the news media in December, 1968.

Acknowledgment for assistance in providing information for this report and in preparation of the statistical appendix is due to: Gladys W. Ellsworth, Department of Conservation and Economic Development; Sidney Glaser, Department of the Treasury; Donald W. Barrowman, Department of Agriculture; Eugene S. Taylor, Department of Agriculture; Walter J. Chartier, Department of Labor and Industry; George L. Hutchins, Department of Labor and Industry; Arthur J. O'Neal, Jr., Department of Labor and Industry.

distinctly superior. In New Jersey as well as in the nation, 1967 was a year of faltering activity: during that year the growth of employment and income slowed down, industrial production and the manufacturing workweek actually declined, and unemployment rose quite steeply, at least during the first half of the year. The year 1968, by contrast, brought a resumption of vigorous growth, so that public interest shifted rapidly from concern about slack demand to concern about inflationary over-expansion. Although, by and large, the New Jersey economy participated in the nation-wide revival of vigorous expansion, it lagged behind the nation in the growth of per capita income.

Nonagricultural employment in New Jersey grew from 2.42 to 2.49 million. This growth was limited by the relatively small increases of employment in manufacturing and in transportation and public utilities. The unemployment rate changed very little. Gross state product, personal income, weekly earnings of factory workers, and retail sales rose briskly, but these rises were accompanied by significant increases in prices. Construction employment and dollar values of construction contracts rose, and industrial building approvals recovered from their 1967 slump. But residential construction remained at low levels. Some clue to an upturn may be discerned from recent figures on residential contract awards since removal of the 6 percent ceiling on mortgage loan interest rates. Finally, agricultural production and income rose significantly over 1967 without, however, regaining the record levels of 1966.

The Outlook for 1969

In line with the forecasts for the nation as a whole, the economy of New Jersey in 1969 is expected to continue on its upward path. Predictions of the nation's Gross National Product for 1969 have recently undergone some upward revisions largely because of changing views on the consequences of the surtax and the strength of capital goods spending. Most forecasters are now placing expected GNP at slightly over \$920-billion. This appears to be a reasonable expectation.

Forecasts of some strategic economic measures are presented in the third column of Table 1. These forecasts are based partly on relationships between state and national activities and partly on informed estimates of the state's economic specialists. Nonfarm employment for 1969 is estimated at 2.525 million, compared with 2.487 million this year. The unemployment rate is expected to deviate little from the 4.6 percent in 1968, despite federal efforts to dampen the national boom. Retail sales will rise by \$1-billion, reflecting a \$1.8-billion gain in personal income received by New Jersey residents. Average weekly earnings of production workers in manufacturing (not shown in the table) are expected to rise from \$125.76 to about \$133.00.

Altogether, the economy of New Jersey can be expected to show favorable growth. Recent government actions—such as the large scale reclamation plans for the Jersey Meadows, bond financing of major construction projects, and the operations of the new Housing Finance Agency—may further accelerate New Jersey's growth.

Table 1
Economic Activity In New Jersey
1967, 1968, and 1969
Selected Measures

		1967	1968	1969 ⁴
Gross state product ¹	billions	30.4	33.1	35.2
Total nonfarm employment ²	millions	2.421	2.487	2.525
Total unemployment rate ³	percent	4.5	4.6	4.6
Average weekly hours	hours	40.6	40.7	40.8
Personal income	\$ billions	25.7	27.5	29.3
Retail sales	\$ billions	10.9	12.0	13.0
Total construction contracts awarded	\$ billions	1.926	2.381	n.a.
Cash receipts from farm marketing	\$ millions	252	258	n.a.

¹ For source and derivation of these estimates see Norman White's article in Part V of this Report.

² Adjusted to 1968 benchmarks.

³ Adjusted to 1967 benchmarks.

⁴ Forecast.

n.a.—not available.

Employment and Unemployment

For most of the last ten years, nonfarm employment in the state and the nation ran parallel: by early 1967 they had risen some 22 percent above their 1957-59 levels. However, according to the only comparable statistics presently available for New Jersey and the United States (based on 1967 benchmark adjustments), the growth trends diverge considerably during the past two years. Between December 1966 and December 1968, nonfarm payroll employment in New Jersey rose by 2.5 percent compared with 6.1 percent in the nation. This difference developed gradually over the two years and can be traced partly to actual declines in employment in the manufacturing segment (particularly in electrical machinery, transportation equipment, and other durables). Recent benchmark adjustments of the New Jersey employment figures (to 1968 benchmarks) raise the state's employment increase to 4.8 percent—almost twice the earlier estimate and considerably closer to the increase shown by the unrevised U. S. estimates.¹ Table 2 shows that all other major industry groups, except manufacturing,

¹ New benchmark adjusted national data are not yet available at the time of this writing, so that we cannot yet make any comparisons on the new basis. The magnitude of the estimating errors in New Jersey's nonfarm employment will be the subject of a special investigation by the Division of Planning and Research in the Department of Labor and Industry (see *New Jersey Economic Indicators*, April 1969, p. 13).

registered net employment gains over the two-year period; trade, government, and services contributed most to the expansion.

Table 2
Nonfarm Payroll Employment In New Jersey*
By Major Industry Group
December 1966, 1967, and 1968

	<i>Dec. 1966</i>	<i>Dec. 1967</i>	<i>Dec. 1968</i>	<i>% Change Dec. '66- Dec. '67</i>	<i>% Change Dec. '67- Dec. '68</i>	<i>% Change Dec. '66- Dec. '68</i>
Total Nonfarm	2,418.0	2,465.8	2,535.2	2.0	2.8	4.8
Manufacturing	893.4	881.3	890.7	-1.4	1.1	-0.3
Durable Goods	474.0	462.0	463.7	-2.5	0.4	-2.2
Nondurable Goods	419.4	419.3	427.0	0.0	1.8	1.8
Mining	2.7	2.7	3.0	0.0	11.1	11.1
Construction	106.9	110.0	113.6	2.9	3.3	6.3
Transportation and Public Utilities ..	165.9	166.2	169.3	0.2	1.9	2.0
Wholesale and Retail Trade	490.0	501.5	525.8	2.3	4.8	7.3
Finance, Insurance, Real Estate	103.6	107.8	110.9	4.1	2.9	7.0
Service and Miscellaneous	330.7	356.0	371.5	7.7	4.4	12.3
Government	323.9	340.3	350.4	5.1	3.0	8.2

* Adjusted to 1968 benchmarks.

Unemployment in New Jersey averaged 131,300 for an estimated unemployment rate of 4.6 percent compared to a nationwide rate of only 3.5 percent. A relatively high New Jersey rate could be understood in terms of unfavorable employment conditions in several urban centers. However, unemployment estimates for states and regions are presently undergoing a revision which will bring New Jersey closer to the national average. In any case, the level and composition of unemployment in New Jersey indicate the great challenge posed to the state and its government by the problems of the cities and their ghettos, the skill distribution of the labor force, the needs for industrial growth and diversification, and other conditions that affect the supply and demand for labor.

Personal Incomes, Prices, and Retail Sales

Average weekly earnings and personal incomes in New Jersey rose sharply from 1967 to 1968, as shown in Table 3. The level of average weekly earnings in New Jersey's manufacturing industries remains above the national average. However, the rise from 1967 to 1968 was slightly slower in the state than in the nation for both average weekly earnings and personal income. More importantly, a considerable portion of this rise was

dissipated by simultaneous increases in living costs. The rate of price inflation (4.6 percent) deprived manufacturing wage earners of the better part of their wage increases (5.7 percent).

While retail sales changed little from 1966 to 1967, they rose briskly by more than 10 percent in the next year. This compares favorably with a rise of national retail sales of 8.5 percent between 1967 and 1968.

Table 3
Earnings, Income, Spending and Prices in
New Jersey and in the United States
1966, 1967, and 1968

	<i>New Jersey</i>			<i>United States</i>		
	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>
Average Weekly Earnings ¹ (Dollars) . .	\$117.29	\$118.96	\$125.76	\$112.34	\$114.90	\$122.46
Personal Income (\$ billions)	23.9	25.7	27.5	583.4	625.0	683.2
Retail Sales (\$ billions)	10.7	10.9	12.0	304.0	313.4	340.0
Consumer Price Index ² (1957-59=100)	114.9	117.9	123.3	113.1	116.3	121.2
	<i>New Jersey</i>			<i>United States</i>		
	<i>1966-1967</i>	<i>1967-1968</i>	<i>1966-1968</i>	<i>1966-1967</i>	<i>1967-1968</i>	<i>1966-1968</i>
Average Weekly Earnings ¹	1.4	5.7	7.2	2.3	6.6	9.0
Personal Income	7.5	7.0	15.1	7.1	9.3	17.1
Retail Sales	1.8	10.1	12.1	3.1	8.5	11.8
Consumer Price Index ²	2.6	4.6	7.3	2.8	4.2	7.2

¹ Production workers in manufacturing. Levels adjusted to 1967 benchmarks.

² Average of price indexes for New York-Northeastern New Jersey and for Philadelphia-Southern New Jersey Standard Metropolitan Statistical Areas.

Source: N. J. Department of Labor and Industry, *N. J. Economic Indicators*.

Construction

New Jersey construction activity evidenced mixed trends during 1968. Chart 1 shows that construction employment and dollar value of total construction contracts awarded were clearly higher in 1968 than in 1967. However, much of the increase in dollar value of contracts awarded is accounted for by the sharp rises in construction costs. The physical volume of dwelling units authorized stayed close to its low 1967 levels, but in recent months there have been signs of recovery. We believe that the lifting of the 6

percent usury ceiling is beginning to stimulate the supply of residential construction. The high current mortgage rates operate, of course, in the opposite direction on the demand side.

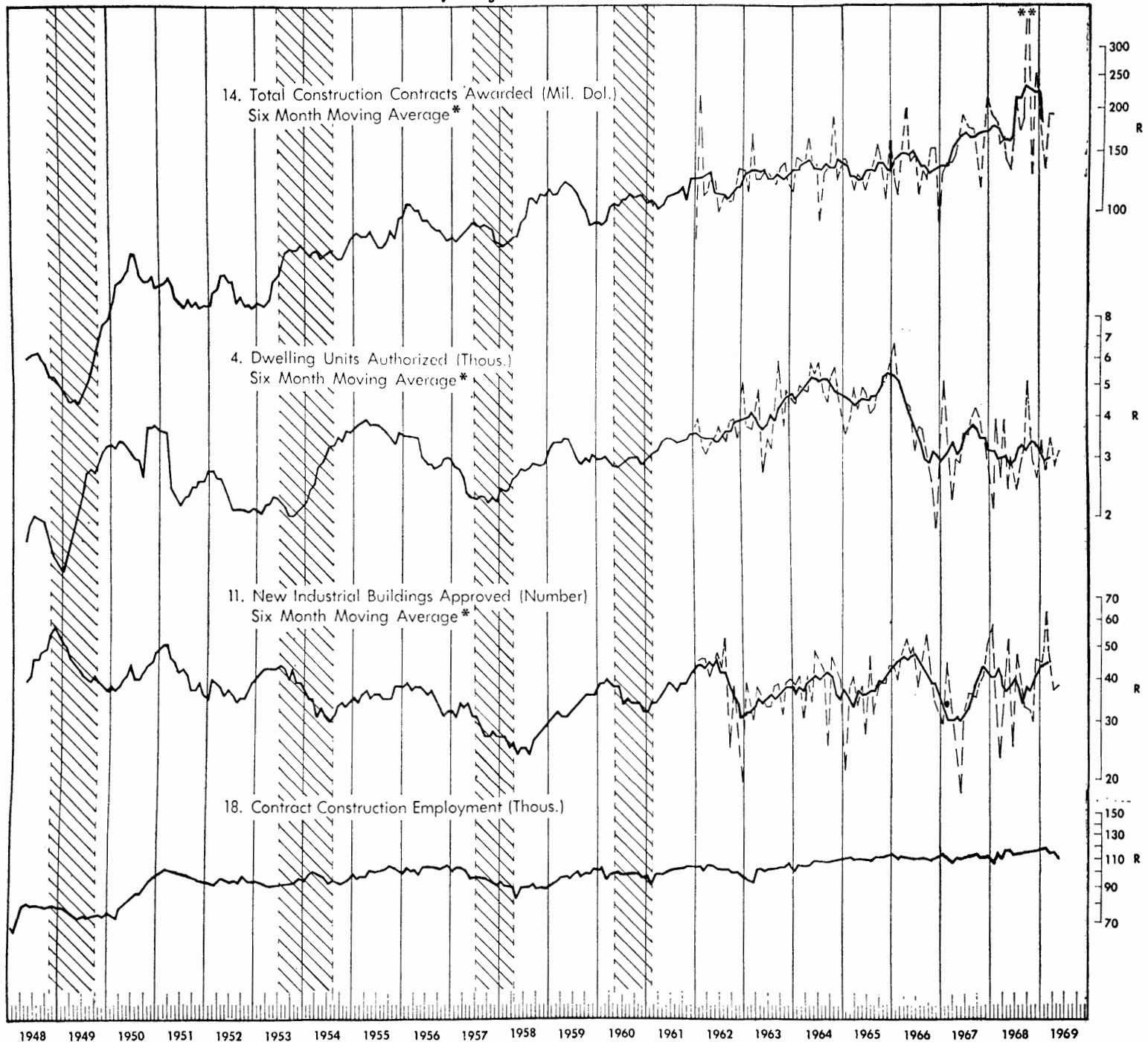
Industrial building shows up considerably better—at least in comparison with 1967. The better performance of industrial construction reflects, among other factors, the lesser sensitivity of this sector to high mortgage rates and construction costs.

Agriculture

Climatic conditions were not favorable to agriculture in the Garden State during 1968. Summer rainfall was deficient, and temperatures were extremely high during much of July and August. In spite of these handicaps, farmers managed to produce good crops and livestock and to improve their income. The inclement mid-summer weather was countered by extensive irrigation. Harvest weather turned out to be nearly ideal so that prices for farm products were up from the previous year and the flow of marketable products was more regular. Cash receipts from farm marketing (\$258-million) were about 2.4 percent higher than in 1967 (\$252-million), and total net farm income as well as net income per farm made a favorable showing, although somewhat below the record levels reached in 1966.

CHART I. NEW JERSEY CONSTRUCTION INDICATORS

Seasonally Adjusted Data, 1948-1969



* Non-averaged data superimposed for recent months.

R-Ratio Scale

** Sharp rise in October to \$579.5 million due to heavy engineering construction.

Source: N.J. Department of Labor and Industry, *N.J. Economic Indicators*

VI

STATISTICAL APPENDIX

TABLE 1
POPULATION AND EMPLOYMENT, NEW JERSEY, 1956-1968

Year	Civilian Resident Population	Work Force	Employment	Unemployment		Insured Unemploy- ment Rate (Percent)	
				Number (000)	Rate (Percent)		
In Thousands							
1956	5,570.0	2,406.6	2,263.2	138.6	5.8	4.6
1957	5,686.0	2,448.1	2,290.0	156.8	6.4	5.3
1958	5,836.0	2,472.6	2,248.1	222.5	9.0	7.6
1959	5,964.0	2,483.1	2,303.2	175.5	7.1	5.5
1960	6,053.0	2,507.4	2,337.2	168.5	6.7	5.7
1961	6,220.0	2,543.5	2,355.9	185.5	7.3	6.0
1962	6,331.0	2,575.1	2,415.0	159.0	6.2	5.2
1963	6,490.0	2,618.4	2,447.9	168.8	6.4	5.4
1964	6,630.0	2,655.5	2,489.6	162.1	6.1	4.8
1965	6,749.0	2,724.5	2,582.2	140.0	5.1	3.9
1966	6,843.0	2,789.6	2,664.6	122.6	4.4	3.2
1967	6,947.0	2,855.2	2,722.4	128.3	4.5	3.4
1968	7,020.0	2,859.5	2,722.7	131.3	4.6	3.3

NOTES:

The 1968 estimate is provisional.

The rate of insured unemployment is based on weekly averages of insured unemployment (State UI Program) expressed as a percent of the average total number of jobs covered by the State Unemployment Compensation Program.

Work force, employment, and unemployment estimates are adjusted to first quarter 1968 benchmarks.

Annual average work force and employment data from 1963 on are based on monthly data.

Annual averages for 1962 and prior years are based on bimonthly data.

Sources: New Jersey Department of Labor and Industry, U. S. Department of Commerce.

TABLE 2
WORK FORCE, UNEMPLOYMENT, AND EMPLOYMENT
ATLANTIC CITY LABOR AREA, 1956-1968
(In thousands)

Year	Work Force ^a	Unemployment		Employment		
		Number	Rate (Percent)	Nonagricultural		Agricultural
				Wage and Salary Employment	All Other ^b	
1956	62.8	5.6	8.9	44.2	10.4	2.6
1957	64.1	6.4	10.0	44.9	10.2	2.6
1958	66.6	7.9	11.9	45.3	10.7	2.7
1959	68.8	6.8	9.9	48.2	11.1	2.7
1960	67.9	5.7	8.4	49.3	10.1	2.8
1961	70.0	6.2	8.9	50.3	10.6	2.9
1962	71.4	5.7	8.0	52.0	10.5	3.2
1963	71.3	5.6	7.9	52.5	10.2	3.0
1964	72.9	5.5	7.5	54.0	10.3	3.1
1965	74.2	4.8	6.5	56.2	10.2	3.0
1966	76.9	4.4	5.7	59.5	10.1	2.9
1967	77.3	4.4	5.7	60.4	9.6	2.8
1968	79.5	4.4	5.5	62.8	9.6	2.6

a Persons involved in labor-management disputes are included in total work force estimates and are excluded from unemployment and employment estimates.

b "All other" nonagricultural employment includes self-employed, unpaid family, and domestic workers in private households.

Atlantic City, Camden, Jersey City, Long Branch, Newark, Paterson, Perth Amboy, and Trenton Labor Areas, for which data are presented in Tables 2 to 9, contained 92.0% of the New Jersey work force in 1968. The other labor areas are Bridgeton, Flemington, Lakewood, Newton, Phillipsburg, Salem, and Wildwood.

All estimates are adjusted to first quarter 1968 benchmarks.

Annual average work force and employment data from 1963 on are based on monthly data. Annual averages for 1962 and prior years are based on bimonthly data.

Source: New Jersey Department of Labor and Industry.

TABLE 3
WORK FORCE, UNEMPLOYMENT, AND EMPLOYMENT
CAMDEN LABOR AREA, 1956-1968
(In thousands)

Year	Work Force ^a	Unemployment		Employment		
		Number	Rate (Percent)	Nonagricultural		Agricultural
				Wage and Salary Employment	All Other ^b	
1956	220.1	15.1	6.9	168.7	26.4	9.9
1957	221.4	16.6	7.5	169.6	25.5	9.6
1958	229.6	20.2	8.8	171.9	27.0	9.7
1959	234.8	16.4	7.0	180.9	27.9	9.0
1960	241.5	16.5	6.8	187.7	28.3	8.6
1961	249.1	19.2	7.7	191.9	29.7	8.3
1962	257.3	19.2	7.5	199.5	29.7	8.9
1963	258.9	21.3	8.2	200.1	28.6	8.7
1964	259.8	20.6	7.9	202.4	28.4	8.3
1965	264.9	16.1	6.1	212.2	28.4	8.0
1966	272.7	13.1	4.8	224.3	27.8	7.3
1967	288.8	14.3	5.1	233.9	27.3	6.9
1968	284.9	14.9	5.2	236.2	26.4	6.8

See footnotes at the end of Table 2.

TABLE 4
WORK FORCE, UNEMPLOYMENT, AND EMPLOYMENT
JERSEY CITY LABOR AREA, 1956-1968
(In thousands)

Year	Work Force ^a	Unemployment		Employment		
		Number	Rate (Percent)	Nonagricultural		Agricultural
				Wage and Salary Employment	All Other ^b	
1956	327.6	18.7	5.7	282.1	26.7	.1
1957	324.8	20.3	6.3	278.8	25.5	.1
1958	315.5	28.5	9.0	261.7	25.1	.1
1959	304.7	22.6	7.4	257.8	23.9	.1
1960	299.9	21.6	7.2	256.7	21.2	.1
1961	298.5	23.3	7.8	253.5	21.5	.1
1962	295.4	18.0	6.1	255.4	21.0	.1
1963	291.2	19.4	6.7	251.4	19.7	.1
1964	287.0	17.9	6.2	249.5	19.3	.1
1965	289.7	15.2	5.2	255.3	18.7	.1
1966	292.4	12.9	4.4	261.3	17.8	0
1967	294.2	14.5	4.9	262.7	16.9	0
1968	296.3	15.7	5.3	263.9	16.0	.1

See footnotes at the end of Table 2.

TABLE 5
WORK FORCE, UNEMPLOYMENT, AND EMPLOYMENT
LONG BRANCH LABOR AREA, 1956-1968
(In thousands)

Year	Work Force ^a	Unemployment		Employment		
		Number	Rate (Percent)	Nonagricultural		Agricultural
				Wage and Salary Employment	All Other ^b	
1956	100.3	7.0	7.0	69.7	18.2	5.4
1957	101.6	7.8	7.7	70.2	18.2	5.4
1958	105.5	10.7	10.1	70.1	19.2	5.5
1959	107.2	9.2	8.6	72.7	19.8	5.5
1960	107.9	8.8	8.2	74.5	19.2	5.4
1961	108.9	9.5	8.7	75.8	19.3	4.3
1962	113.1	8.3	7.3	80.9	19.7	4.1
1963	113.7	8.7	7.3	86.0	20.1	3.9
1964	124.0	8.2	6.6	91.0	20.9	3.8
1965	129.5	7.7	5.9	97.0	21.3	3.5
1966	134.7	6.7	5.0	103.4	21.2	3.4
1967	139.6	6.7	4.5	108.6	21.0	3.3
1968	145.9	7.2	4.9	114.2	21.1	3.2

See footnotes at the end of Table 2.

TABLE 6
WORK FORCE, UNEMPLOYMENT, AND EMPLOYMENT
NEWARK LABOR AREA, 1956-1968
(In thousands)

Year	Work Force ^a	Unemployment		Employment		
		Number	Rate (Percent)	Nonagricultural		Agricultural
				Wage and Salary Employment	All Other ^b	
1956	749.7	40.7	5.4	624.6	77.6	4.5
1957	769.3	46.2	6.0	640.0	78.6	4.3
1958	773.8	65.5	8.5	622.9	81.0	4.1
1959	776.7	51.1	6.6	639.4	82.4	3.6
1960	794.5	50.0	6.3	655.9	85.1	3.3
1961	801.9	54.0	6.7	656.0	87.7	3.1
1962	808.6	46.5	5.7	671.9	86.5	3.0
1963	815.6	48.3	5.9	680.3	83.9	2.9
1964	826.8	45.8	5.5	693.0	84.1	2.5
1965	849.4	39.3	4.6	723.6	83.6	2.2
1966	862.1	35.3	4.1	744.3	80.0	2.1
1967	877.1	36.3	4.1	761.0	77.4	1.9
1968	886.3	36.3	4.0	772.5	75.0	1.7

See footnotes at the end of Table 2.

TABLE 7
WORK FORCE, UNEMPLOYMENT, AND EMPLOYMENT
PATERSON LABOR AREA, 1956-1968
(In thousands)

Year	Work Force ^a	Unemployment		Employment		
		Number	Rate (Percent)	Nonagricultural		Agricultural
				Wage and Salary Employment	All Other ^b	
1956	439.2	23.7	5.4	347.1	64.4	3.6
1957	448.4	27.3	6.1	352.7	64.4	3.5
1958	452.9	42.1	9.3	341.8	65.2	3.4
1959	458.3	31.6	6.9	356.1	66.8	3.4
1960	457.0	30.6	6.7	362.0	60.8	3.2
1961	467.1	33.4	7.2	366.6	63.4	3.2
1962	476.9	26.4	5.5	383.4	63.9	3.1
1963	490.9	28.6	5.8	395.9	63.4	2.9
1964	500.2	30.3	6.1	402.5	63.7	2.6
1965	512.8	26.3	5.1	421.2	63.2	1.8
1966	527.1	22.6	4.3	441.6	61.3	1.2
1967	542.1	22.5	4.2	457.9	59.7	.7
1968	557.1	23.1	4.1	474.7	58.3	.6

See footnotes at the end of Table 2.

TABLE 8
WORK FORCE, UNEMPLOYMENT, AND EMPLOYMENT
PERTH AMBOY LABOR AREA, 1956-1968
(In thousands)

Year	Work Force ^a	Unemployment		Employment		
		Number	Rate (Percent)	Nonagricultural		Agricultural
				Wage and Salary Employment	All Other ^b	
1956	201.0	9.2	4.6	165.4	21.2	4.2
1957	207.1	10.7	5.2	170.3	21.8	4.1
1958	211.2	17.7	8.4	166.8	22.6	4.0
1959	213.5	12.9	6.0	173.4	22.3	3.9
1960	219.4	12.8	5.8	180.6	22.1	3.9
1961	225.8	14.8	6.5	183.7	23.1	4.0
1962	231.4	14.3	6.1	190.0	23.1	3.8
1963	236.3	14.6	6.1	195.0	22.6	3.7
1964	242.4	13.6	5.6	201.8	23.1	3.6
1965	252.3	12.3	4.9	213.2	23.1	3.3
1966	263.4	10.6	4.0	226.1	22.8	2.9
1967	274.5	12.0	4.4	235.3	22.6	2.9
1968	283.9	13.0	4.6	244.4	22.5	2.8

See footnotes at the end of Table 2.

TABLE 9
WORK FORCE, UNEMPLOYMENT, AND EMPLOYMENT
TRENTON LABOR AREA, 1956-1968
(In thousands)

Year	Work Force ^a	Unemployment		Employment		
		Number	Rate (Percent)	Nonagricultural		Agricultural
				Wage and Salary Employment	All Other ^b	
1956	125.8	7.0	5.6	102.8	12.8	2.3
1957	128.0	7.7	6.0	104.9	13.0	2.4
1958	127.8	11.2	8.8	100.7	13.4	2.1
1959	129.0	8.7	6.7	103.8	13.7	2.1
1960	129.0	8.0	6.2	106.3	12.8	1.9
1961	129.4	9.1	7.1	105.3	13.0	2.0
1962	129.2	6.9	5.4	107.4	12.8	1.9
1963	131.8	6.6	5.0	110.5	12.6	2.0
1964	134.9	5.8	4.3	114.1	12.8	1.7
1965	139.1	5.6	4.1	119.1	12.7	1.7
1966	141.8	5.3	3.7	122.7	12.1	1.7
1967	143.4	5.5	3.8	124.5	11.6	1.5
1968	146.1	5.3	3.6	127.7	11.4	1.5

See footnotes at the end of Table 2.

TABLE 10

WAGE AND SALARY WORKERS IN NONAGRICULTURAL ESTABLISHMENTS, MAJOR INDUSTRY DIVISIONS,
NEW JERSEY, 1947-1968

(In thousands)

<i>Year</i>	<i>Total Non- Agricultural Employment</i>	<i>Manu- facturing</i>	<i>Mining</i>	<i>Contract Construction</i>	<i>Transportation and Public Utilities</i>	<i>Wholesale and Retail Trade</i>	<i>Finance, Insurance and Real Estate</i>	<i>Services and Miscellaneous</i>	<i>Government</i>
1947	1,622.6	782.6	4.0	65.4	142.2	249.7	63.1	158.8	156.8
1948	1,657.1	786.3	4.1	74.6	141.0	260.5	67.0	163.7	159.9
1949	1,595.6	721.8	4.0	72.5	134.0	264.5	66.5	166.2	166.1
1950	1,657.1	756.4	4.3	81.2	135.4	273.7	68.3	166.8	171.0
1951	1,768.1	821.2	4.5	95.4	143.9	285.5	69.8	169.8	177.7
1952	1,804.0	832.9	4.6	91.9	146.7	295.6	70.7	174.0	187.6
1953	1,850.2	856.2	4.7	90.3	147.8	303.4	73.6	180.6	193.6
1954	1,820.8	802.1	4.3	93.6	146.1	312.4	76.1	186.0	200.2
1955	1,865.3	811.1	4.0	98.7	148.4	322.5	78.8	195.4	206.4
1956	1,933.5	834.8	4.3	100.7	153.8	336.6	81.8	208.4	213.1
1957	1,968.3	835.0	4.4	96.2	154.3	349.1	85.4	222.7	221.2
1958	1,911.3	775.4	3.7	88.6	148.2	351.2	86.7	230.5	227.0
1959	1,970.5	801.3	3.6	95.7	147.0	360.5	87.3	241.6	233.5
1960	2,017.1	808.6	3.5	98.1	149.5	374.6	88.6	252.0	242.2
1961	2,033.7	791.1	3.4	99.4	150.1	380.7	91.2	264.2	253.6
1962	2,096.1	812.8	3.4	100.7	150.8	393.3	93.4	278.9	262.8
1963	2,129.3	809.1	3.5	100.2	151.9	405.5	95.5	291.5	272.1
1964	2,168.5	806.2	3.6	105.7	153.4	420.2	97.8	301.6	280.0
1965	2,255.7	836.0	3.5	109.3	157.0	439.0	99.9	315.6	295.4
1966	2,357.7	877.5	3.0	109.8	162.2	460.3	102.4	330.1	312.0
1967	2,431.4	882.1	2.8	111.0	165.8	472.9	106.0	351.6	329.2
1968	2,487.4	885.9	3.0	114.1	166.4	493.8	109.7	372.2	343.3

Series have been adjusted to March 1968 benchmarks.

Source: N. J. Department of Labor and Industry.

TABLE 11

WAGE AND SALARY WORKERS IN MANUFACTURING, DURABLE GOODS, NEW JERSEY, 1947-1968

(In thousands)

Year	Total Durable Goods	Lumber and Wood Products	Furniture and Fixtures	Stone, Clay and Glass Products	Primary Metal Industries	Ordnance and Fabricated Metals	Machinery, Except Electrical	Electrical Machinery	Trans- portation Equipment	Instruments and Related Products	Miscellaneous Manu- facturing Industries
1947	403.0	6.9	7.7	31.0	45.8	45.7	56.0	108.9	47.4	18.2	35.5
1948	397.2	7.0	8.2	31.4	44.2	44.3	53.8	106.7	45.9	18.8	36.9
1949	346.1	6.5	7.6	29.0	37.6	40.7	48.8	87.3	37.5	17.9	33.2
1950	372.3	6.8	8.9	31.7	40.5	44.2	49.9	97.2	40.1	17.8	35.3
1951	427.9	7.1	9.1	35.3	35.3	48.3	60.0	115.1	47.5	22.4	36.6
1952	446.6	6.4	8.5	33.4	33.4	50.5	61.7	121.7	60.2	24.7	34.3
1953	470.4	6.3	8.6	33.8	33.8	57.2	64.0	132.5	62.7	26.5	32.6
1954	431.3	6.4	8.2	32.5	32.5	54.6	60.6	116.7	56.5	24.9	28.3
1955	435.5	6.4	8.5	34.1	34.1	55.7	59.1	117.5	57.1	25.3	27.8
1956	455.9	6.4	9.1	34.3	34.3	55.5	65.8	124.3	57.4	27.9	27.9
1957	457.3	6.3	9.2	33.9	46.9	56.7	65.5	125.6	55.9	29.4	27.9
1958	411.9	5.6	8.7	31.9	40.9	50.9	57.0	115.0	48.7	27.4	25.8
1959	430.5	5.9	9.2	33.1	41.7	53.7	57.8	121.4	50.5	30.2	27.0
1960	436.5	5.7	9.8	33.7	42.7	54.2	61.0	122.4	48.5	31.7	26.8
1961	421.3	5.6	9.0	34.4	40.7	53.6	57.3	119.5	41.7	31.9	27.6
1962	436.1	5.8	9.7	34.6	40.1	55.6	60.3	125.2	42.5	32.4	29.9
1963	425.7	5.7	8.9	34.9	38.6	55.2	60.1	121.7	39.0	32.9	28.7
1964	418.6	5.6	9.0	35.6	37.9	56.7	61.4	115.1	35.6	31.0	30.7
1965	437.4	5.6	9.4	36.9	39.8	60.2	65.4	117.7	36.8	32.7	32.9
1966	461.8	5.2	10.5	39.3	40.4	63.8	70.8	129.2	36.4	34.3	31.9
1967	464.0	5.0	11.0	39.1	38.5	65.4	75.0	131.5	32.0	36.5	30.0
1968	461.1	5.4	10.0	38.8	38.6	66.9	75.5	129.1	31.9	35.5	29.4

Series have been adjusted to March 1968 benchmarks.

Source: N. J. Department of Labor and Industry.

TABLE 12

WAGE AND SALARY WORKERS IN MANUFACTURING, NONDURABLE GOODS, NEW JERSEY, 1947-1968
(In thousands)

Year	Total Nondurable Goods	Food and Kindred Products	Tobacco Manufactures	Textile Mill Products	Apparel and Related Products	Paper and Allied Products	Printing, Publishing and Allied Industries	Chemicals and Allied Products	Petroleum Refining and Related Industries	Rubber and Miscellaneous Plastic Products	Leather and Leather Products
1947	379.6	56.9	5.5	61.1	78.9	21.7	18.6	80.1	15.6	29.5	11.7
1948	389.1	57.1	5.1	64.7	85.6	22.2	19.9	77.6	16.2	28.4	12.3
1949	375.7	55.9	4.9	57.8	88.9	21.8	21.4	71.9	16.3	24.7	12.1
1950	384.1	56.5	4.6	58.2	89.0	23.5	22.8	73.7	16.5	26.4	12.9
1951	393.3	59.8	4.4	53.7	89.8	24.8	23.4	79.1	17.3	28.4	12.6
1952	386.3	61.3	4.4	50.1	88.7	24.2	23.5	78.5	16.3	27.3	12.1
1953	385.8	60.9	4.3	48.3	85.0	26.5	24.8	79.2	16.4	28.4	12.0
1954	370.8	62.2	4.0	41.9	79.7	26.0	25.9	78.0	15.2	26.7	11.2
1955	375.6	61.7	3.4	42.7	79.6	26.3	27.1	80.8	14.5	27.5	11.9
1956	378.9	63.5	2.6	41.6	79.7	27.2	28.1	81.8	14.3	28.3	11.8
1957	377.7	62.9	2.0	38.6	79.2	28.3	30.5	83.3	13.8	27.7	11.4
1958	363.5	62.9	1.9	33.0	76.7	28.0	30.3	80.8	12.3	26.6	11.1
1959	370.8	62.3	1.8	33.2	79.2	28.3	31.5	82.4	11.7	29.3	11.1
1960	372.1	62.9	1.7	31.4	77.7	28.0	32.3	86.4	11.5	29.2	11.0
1961	369.8	63.9	1.6	29.1	76.4	28.1	32.6	87.0	11.1	29.2	10.8
1962	376.7	64.2	1.5	28.6	75.8	29.7	33.0	91.0	10.7	30.7	11.5
1963	383.4	64.9	1.4	27.9	74.5	31.4	34.6	94.8	10.5	31.7	11.7
1964	387.6	65.0	1.5	27.8	74.6	31.5	35.8	96.4	9.6	34.2	11.2
1965	398.6	66.4	1.4	28.5	77.3	31.3	37.5	98.9	9.8	36.0	11.5
1966	415.7	67.2	.8	29.6	80.3	33.0	39.6	105.5	10.3	37.2	12.2
1967	418.1	65.3	.6	29.1	78.5	33.7	41.5	110.9	9.5	37.7	11.3
1968	424.8	64.9	.3	30.4	79.4	34.1	41.9	113.2	9.6	39.5	11.5

Series have been adjusted to March 1968 benchmarks.

Source: N. J. Department of Labor and Industry.

TABLE 13
EMPLOYMENT, HOURS, AND EARNINGS OF PRODUCTION
WORKERS ON MANUFACTURING PAYROLLS,
NEW JERSEY, 1947-1968

<i>Year</i>	<i>Employment (thousands)</i>	<i>Average Weekly Hours</i>	<i>Average Weekly Earnings (dollars)</i>	<i>Average Hourly Earnings (dollars)</i>
1947	n.a.	40.7	52.26	1.28
1948	n.a.	40.5	56.37	1.39
1949	n.a.	39.4	56.97	1.45
1950	n.a.	40.8	61.65	1.51
1951	n.a.	41.1	67.28	1.64
1952	n.a.	41.1	71.02	1.73
1953	n.a.	40.9	74.32	1.82
1954	n.a.	39.8	74.43	1.87
1955	n.a.	40.7	79.16	1.94
1956	n.a.	40.5	82.98	2.05
1957	n.a.	39.9	85.23	2.14
1958	563.7	39.4	86.80	2.20
1959	583.8	40.3	92.45	2.29
1960	580.8	39.6	93.93	2.37
1961	563.1	40.0	97.60	2.44
1962	576.0	40.5	101.66	2.51
1963	567.5	40.5	104.90	2.59
1964	564.4	40.6	108.40	2.67
1965	587.1	41.0	112.34	2.74
1966	616.5	41.3	117.29	2.84
1967	604.1	40.6	118.96	2.93
1968	598.3	40.7	125.76	3.09

n.a.—not available.

Series have been adjusted to March 1967 benchmarks.

Sources: New Jersey Department of Labor and Industry; U. S. Department of Labor, Bureau of Labor Statistics.

TABLE 14
 CONSUMER PRICE INDEXES
 FOR URBAN WAGE EARNERS AND CLERICAL WORKERS,
 1947-1968
 1957-59=100

<i>Year</i>	<i>United States</i>	<i>New York SCA^a</i>	<i>Philadelphia SMSA^b</i>	<i>Average of New York and Philadelphia Areas</i>
1947	77.8	79.7	77.6	78.6
1948	83.8	85.1	83.8	84.4
1949	83.0	84.1	82.8	83.4
1950	83.8	84.7	83.3	84.0
1951	90.5	91.0	91.0	91.0
1952	92.5	92.5	92.8	92.6
1953	93.2	93.0	93.2	93.1
1954	93.6	93.6	94.2	93.9
1955	93.3	93.1	94.1	93.6
1956	94.7	94.5	95.3	94.9
1957	98.0	97.6	98.4	98.0
1958	100.7	100.5	100.2	100.4
1959	101.5	101.9	101.4	101.6
1960	103.1	103.9	103.2	103.6
1961	104.2	104.8	104.4	104.6
1962	105.4	106.4	105.2	105.8
1963	106.7	108.7	107.2	108.0
1964	108.1	110.4	108.8	109.6
1965	109.9	112.2	110.6	111.4
1966	113.1	116.0	113.7	114.8
1967	116.3	119.0	116.8	117.9
1968	121.2	124.1	122.4	123.3

a Standard Consolidated Area: New York-Northeastern New Jersey (17 counties).

b Standard Metropolitan Statistical Area.

Source: U. S. Department of Labor, Bureau of Labor Statistics.

TABLE 15
PERSONAL INCOME, NEW JERSEY AND UNITED STATES,
1948-1968

Year	Total Personal Income		Per Capita Personal Income			
	New Jersey (millions of current dollars)	United States	New Jersey (current dollars)	United States	New Jersey ^a (1957-59 dollars)	United States ^b
1948	8,063	208,878	1,689	1,430	2,001	1,706
1949	8,131	205,791	1,663	1,384	1,994	1,667
1950	8,934	226,214	1,834	1,496	2,183	1,785
1951	10,151	253,233	2,028	1,652	2,228	1,825
1952	10,934	269,767	2,133	1,733	2,303	1,874
1953	11,750	285,458	2,247	1,804	2,414	1,936
1954	11,957	287,613	2,231	1,785	2,376	1,907
1955	12,688	308,265	2,306	1,876	2,464	2,011
1956	13,719	330,481	2,443	1,975	2,574	2,086
1957	14,550	348,462	2,536	2,045	2,588	2,087
1958	14,822	358,474	2,516	2,068	2,506	2,054
1959	15,845	380,963	2,634	2,161	2,592	2,129
1960	16,528	398,725	2,708	2,215	2,614	2,148
1961	17,336	414,411	2,765	2,264	2,643	2,173
1962	18,449	440,192	2,889	2,368	2,731	2,247
1963	19,400	463,053	2,965	2,455	2,745	2,301
1964	20,550	494,913	3,076	2,586	2,806	2,392
1965	22,148	535,949	3,260	2,765	2,926	2,516
1966	23,911	583,461	3,466	2,978	3,018	2,633
1967	25,685	625,068	3,668	3,159	3,111	2,716
1968	27,428	682,449	3,808	3,393	3,088	2,800

^a A simple average of the Consumer Price Indexes for the New York Standard Consolidated Area and the Philadelphia SMSA was used to express New Jersey per capita personal income in constant 1957-59 dollars.

^b The Consumer Price Index for the United States was used to express United States per capita personal income in constant 1957-59 dollars.

^c 1968 data are preliminary.

Sources: U. S. Department of Commerce and U. S. Department of Labor, Bureau of Labor Statistics and *Business Week*.

TABLE 16
PRODUCTION AND TRADE, NEW JERSEY, 1948-1968

Year	Electric Power Sales				Value of New Dwelling Units Authorized (\$000)	Construction Contracts Awarded (\$000)	Retail Store Sales (\$000,000)	Registration of New Vehicles	
	Total (kilowatt hours in thousands)	Large Industrial and Commercial Users	Small Industrial and Commercial Users	Gasoline Consumption (000 gal.)				Passenger Cars (number)	Commercial Vehicles (number)
1948	6,887,131	3,736,931	1,359,854	1,108,524	n.a.	406,476	n.a.	116,847	25,504
1949	7,026,664	3,578,396	1,483,196	1,199,979	n.a.	408,007	n.a.	165,179	23,544
1950	8,023,122	4,161,454	1,630,075	1,337,876	n.a.	747,771	n.a.	210,436	27,229
1951	8,944,201	4,648,835	1,806,808	1,396,712	n.a.	676,458	n.a.	178,862	25,002
1952	9,578,722	4,837,880	1,969,215	1,487,026	n.a.	690,770	n.a.	149,168	19,335
1953	10,435,872	5,191,330	2,180,598	1,587,990	n.a.	793,889	n.a.	208,376	23,048
1954	10,931,039	5,214,694	2,348,391	1,677,573	n.a.	886,947	n.a.	207,252	20,601
1955	12,184,077	5,874,199	2,584,701	1,806,242	n.a.	1,010,459	n.a.	258,079	22,262
1956	13,224,653	6,323,544	2,807,035	1,846,099	n.a.	1,106,452	n.a.	219,297	21,903
1957	14,196,487	6,642,234	3,097,755	1,850,252	n.a.	1,048,449	n.a.	219,865	20,320
1958	14,949,906	6,829,115	3,322,774	1,907,497	n.a.	1,143,484	n.a.	183,770	17,616
1959	16,632,611	7,683,942	3,719,151	2,007,697	n.a.	1,303,736	n.a.	219,305	20,374
1960	17,569,054	8,125,141	3,967,306	2,050,208	558,591	1,256,532	n.a.	266,299	22,532
1961	19,248,349	8,730,727	4,471,379	2,050,731	622,482	1,307,832	n.a.	250,432	24,606
1962	20,630,556	9,506,486	4,848,024	2,045,680	618,663	1,392,618	n.a.	285,955	24,713
1963	22,077,818	10,108,217	5,309,982	2,148,500	681,597	1,534,448	8,992	318,127	26,804
1964	23,848,214	10,773,759	5,872,988	2,222,915	778,540	1,622,048	9,768	325,293	28,417
1965	25,964,004	11,712,402	6,433,961	2,322,560	804,151	1,555,689	10,396	378,768	30,980
1966	28,512,856	12,814,406	7,043,455	2,391,674	665,653	1,651,494	10,711	352,573	31,072
1967	30,146,448	13,147,596	7,620,829	2,447,834	652,963	1,906,577	10,947	302,680	27,471
1968	32,616,153	13,863,329	8,394,581	2,628,031	576,386 ^a	2,380,846	12,035	356,762	30,724

n.a.—not available.

^a Data incomplete and subject to upward revision after all reports are in. Preliminary 1968 figure represents 80% of all possible monthly reports.

Sources: Electric Power Sales: Edison Electric Institute. Gasoline Consumption: American Petroleum Institute. New Dwelling Units Authorized: N. J. Department of Labor and Industry in cooperation with U. S. Department of Labor. Construction Contracts Awarded: F. W. Dodge Corporation. Retail Sales: U. S. Department of Commerce. Registration of New Vehicles: New Jersey Auto Lists Inc.

NOTES:

Beginning with January 1967, construction contracts awarded were adjusted to reflect more complete coverage of one-family house construction.

Retail store sales not strictly comparable. New series began September 1967.

TABLE 17
BUSINESS ACTIVITY, NEW JERSEY, 1948-1968

Year	Postal Receipts ^a (dollars)	Advertising Linage ^b (000 lines)	Telephone Stations in Service (000)	Business Failures (number)	Liabilities of Business Failures (\$000)	New Incorporations (number)	Apparent Consumption of Distilled Spirits (000 gal.)	New Jersey Turnpike	
								Toll Revenue (\$000)	Number of Vehicles (000)
1948	25,521,507	133,515	1,425	219	15,286	5,510	6,852	n.a.	n.a.
1949	28,207,664	145,319	1,520	366	16,246	5,411	6,688	n.a.	n.a.
1950	29,428,662	151,024	1,620	346	10,926	6,009	8,243	n.a.	n.a.
1951	30,685,151	151,459	1,728	307	11,961	5,581	8,216	n.a.	n.a.
1952	33,226,624	162,413	1,840	319	18,627	6,146	7,824	16,245	17,948
1953	n.a.	172,671	1,964	360	25,856	6,651	8,443	19,195	22,005
1954	47,005,842	160,322	2,084	385	20,086	7,276	8,536	20,758	24,555
1955	48,516,344	171,876	2,235	456	29,753	8,386	9,045	21,124	25,888
1956	50,091,539	176,973	2,386	582	33,919	8,839	10,253	24,515	31,588
1957	52,614,766	172,607	2,526	565	39,604	8,097	9,331	29,025	39,270
1958	55,859,548	168,637	2,646	778	43,475	8,757	9,961	30,162	41,615
1959	63,172,822	178,818	2,801	639	27,619	10,436	10,702	33,321	46,199
1960	68,088,340	182,716	2,948	714	49,071	10,172	11,391	35,588	49,083
1961	71,359,658	177,863	3,074	717	53,282	9,650	11,743	37,197	51,738
1962	75,437,939	189,614	3,219	591	58,468	9,984	12,378	39,246	54,901
1963	85,541,527	197,736	3,345	509	256,075	9,716	12,810	40,781	56,677
1964	89,087,584	201,340	3,504	442	49,261	10,023	13,483	44,153	60,708
1965	89,863,285	266,092	3,693	512	96,334	10,439	14,383	46,128	64,958
1966	96,191,521	282,833	3,892	442	61,191	9,656	14,687	48,616	69,850
1967	99,363,477	278,160	4,081	414	64,215	10,220	15,064	51,238	73,529
1968	118,053,541	290,960	4,276	423	42,692	12,038	15,971	55,348	78,205

n.a.—not available.

^a 1949-52: postal receipts for 25 cities. 1954-68 postal receipts for 37 cities.

^b 1948: 14 newspapers. 1949-53: 15 newspapers. 1954: 14 newspapers. 1955-64: 15 newspapers. 1965-68: 18 newspapers.

Sources: Postal Receipts: New Jersey Economic Review. Advertising Linage: Media Records, Inc. and New Jersey Economic Review. Telephone Stations-in-Service: N. J. Bell Telephone Company and N. J. Telephone Company only. Number and Liabilities of Business Failures and New Incorporations: Dun and Bradstreet, Inc. Apparent Consumption of Distilled Spirits: Distilled Spirits Institute. New Jersey Turnpike—Toll Revenue and Number of Vehicles: New Jersey Turnpike Authority.

TABLE 18
FINANCE, NEW JERSEY, 1948-1968

Year	Bank Debits			Savings in All Insured Savings and Loan Associations	Savings in All Mutual Savings Banks	Ordinary Life Insurance Sales
	Eight Cities (millions of dollars)	Nine Cities (millions of dollars)	Five SMSA Areas (millions of dollars)			
1948	19,756			355,258	516,590	580,688
1949	19,485			422,501	535,518	604,291
1950	22,352			506,037	588,388	725,712
1951	25,455			604,436	650,368	805,489
1952	26,634	26,663		724,481	739,695	890,944
1953		29,575		862,041	824,835	1,058,691
1954		30,014		1,083,298	924,330	1,107,907
1955		32,752		1,290,953	995,780	1,370,565
1956		34,767		1,460,342	1,103,782	1,620,565
1957		36,264		1,651,719	1,162,688	2,201,044
1958		37,993		1,889,145	1,256,831	2,189,707
1959		41,319		2,147,322	1,292,154	2,235,092
1960		43,864		2,414,376	1,327,447	2,171,985
1961		48,851		2,729,116	1,384,518	2,180,105
1962		51,622		3,052,389	1,547,302	2,163,371
1963		56,596		3,418,173	1,692,707	2,381,986
1964		61,709	79,920	3,801,004	1,833,533	2,748,766
1965			90,719	4,171,487	1,992,759	3,112,622
1966			104,425	4,261,895	2,122,482	3,258,043
1967			110,503	4,634,388	2,317,453	3,521,854
1968			127,373	n.a.	2,480,412	3,850,863

^a Standard Metropolitan Statistical Areas: Jersey City; Newark-Paterson-Clifton-Passaic; Atlantic City; and Trenton.

n.a.—not available.

Sources: Bank Debits: Federal Reserve System. Savings in all Insured Savings and Loan Associations: New Jersey Economic Review. Savings in all Mutual Savings Banks: Savings Banks' Association of New Jersey. Ordinary Life Insurance Sales: Life Insurance Agency Management Association.

