54:10A-4 and 54:10A-5

LEGISLATIVE HISTORY CHECKLIST
(Corporation Business Tax Act -- amends, phases out net worth tax)

NJSA 54:10A-4 and 54 10A-5

LAWS 1982 CHAPTER 55

Bill No. A1662

Sponsor(s) D. Gallo and others

Date Introduced June 17, 1982

Committee: Assembly ---

Senate ---

Amended during passage ~~Yes~~ No

Date of Passage: Assembly June 17, 1982

Senate June 17, 1982

Date of approval June 30, 1982

Following statements are attached if available:

Sponsor statement	Yes	~~No~~
Committee Statement: Assembly	~~Yes~~	No
Senate	~~Yes~~	No
Fiscal Note	~~Yes~~	No
Veto Message	~~Yes~~	No
Message on signing	~~Yes~~	No

Following were printed:

Reports	~~Yes~~	No
Hearings	~~Yes~~	No

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See:

974.901 E18 1980 New Jersey. Department of the Treasury. Economic Policy Council and Office of Economic Policy.
Annual report. 13th July 28, 1980. Trenton.
(pp 67-73)

974.901 E18 1981 New Jersey. Department of the Treasury. Economic Policy Council and Office of Economic Policy.
Annual report. 14th. Aug. 28, 1981. Trenton, 1981.
(see especially pp.61-69)

6/22/81

PP

CHAPTER 55 LAWS OF N. J. 1982
APPROVED 6-30-82

ASSEMBLY, No. 1662

STATE OF NEW JERSEY

INTRODUCED JUNE 17, 1982

By Assemblyman D. GALLO, Assemblywoman KALIK, Assemblymen DOYLE, VILLANE, HARDWICK, KAVANAUGH, ROD, GILL, ZIMMER, ALBOHN, SHUSTED, MUZIANI, SMITH, WEIDEL, Assemblywoman MUHLER, Assemblymen PALAIA, WOLF, MARKERT, MILLER, Assemblywoman BROWN, Assemblymen LaCORTE, ROCCO, HAYTAIAN, HENDRICKSON, CHINNICI, KERN, SCHUBER, FELICE, Assemblywoman OGDEN, Assemblymen HAINES, PATERO, BOCCHINI, HOLLENBECK and PELLY

AN ACT to amend the "Corporation Business Tax Act (1945)," approved April 13, 1945 (P. L. 1945, c. 162).

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. Section 4 of P. L. 1945, c. 162 (C. 54:10A–4) is amended to read as follows:

4. For the purposes of this act, unless the context requires a different meaning:

(a) "Commissioner" shall mean the Director of the Division of Taxation of the State Department of the Treasury.

(b) "Allocation factor" shall mean the proportionate part of a taxpayer's net worth or entire net income used to determine a measure of its tax under this act.

(c) "Corporation" shall mean any corporation, joint-stock company or association and any business conducted by a trustee or trustees wherein interest or ownership is evidenced by a certificate of interest or ownership or similar written instrument.

(d) "Net worth" shall mean the aggregate of the values disclosed by the books of the corporation for (1) issued and outstand-

EXPLANATION—Matter enclosed in bold-faced brackets [thus] in the above bill is not enacted and is intended to be omitted in the law.
Matter printed in italics *thus* is new matter.

ing capital stock, (2) paid-in or capital surplus, (3) earned surplus and undivided profits, *and* (4) surplus reserves which can reasonably be expected to accrue to holders or owners of equitable shares, not including reasonable valuation reserves, such as reserves for depreciation or obsolescence or depletion[, and (5) the amount of all indebtedness owing directly or indirectly to holders of 10% or more of the aggregate outstanding shares of the taxpayer's capital stock of all classes, as of the close of a calendar or fiscal year, other than indebtedness which is a result of a bona fide financing of motor vehicle inventory held for sale to customers which financing is provided by a taxpayer customarily and routinely providing for this type of financing. In the case of financial business corporations which are funded through debt from affiliated corporations, the debt to the affiliated corporations is not to be considered as "net worth" and in the case of banking corporations which are affiliates of bank holding companies, as defined in 12 U. S. C. § 1841, and which are funded through debt from such bank holding companies, the debt to those bank holding companies from its banking corporation affiliates is not to be considered as "net worth."] The foregoing aggregate of values shall be reduced by 50% of the amount disclosed by the books of the corporation for investment in the capital stock of one or more subsidiaries, which investment is defined as ownership (1) of at least 80% of the total combined voting power of all classes of stock of the subsidiary entitled to vote and (2) of at least 80% of the total number of shares of all other classes of stock except nonvoting stock which is limited and preferred as to dividends. In the case of investment in an entity organized under the laws of a foreign country, the foregoing requisite degree of ownership shall effect a like reduction of such investment from net worth of the taxpayer, if the foreign entity is considered a corporation for any purpose under the United States federal income tax laws, such as (but not by way of sole examples) for the purpose of supplying deemed-paid foreign tax credits or for the purpose of status as a controlled foreign corporation. In calculating the net worth of a taxpayer entitled to reduction for investment in subsidiaries, the amount of liabilities of the taxpayer shall be reduced by such proportion of the liabilities as corresponds to the ratio which the excluded portion of the subsidiary values bears to the total assets of the taxpayer.

If in the opinion of the commissioner, the corporation's books do not disclose fair valuations the commissioner may make a reasonable determination of the net worth which, in his opinion, would reflect the fair value of the assets, exclusive of subsidiary invest-

ments as defined aforesaid, carried on the books of the corporation, in accordance with sound accounting principles, and such determination shall be used as net worth for the purpose of this act.

(e) "Indebtedness owing directly or indirectly" shall include, without limitation thereto, all indebtedness owing to any stockholder or shareholder and to members of his immediate family where a stockholder and members of his immediate family together or in the aggregate own 10% or more of the aggregate outstanding shares of the taxpayer's capital stock of all classes.

(f) "Investment company" shall mean any corporation whose business during the period covered by its report consisted, to the extent of at least 90% thereof of holding, investing and reinvesting in stocks, bonds, notes, mortgages, debentures, patents, patent rights and other securities for its own account, but this shall not include any corporation which: (1) is a merchant or a dealer of stocks, bonds and other securities, regularly engaged in buying the same and selling the same to customers; or (2) had less than 90% of its average gross assets in New Jersey, at cost, invested in stocks, bonds, debentures, mortgages, notes, patents, patent rights or other securities or consisting of cash on deposit during the period covered by its report or (3) is a banking corporation or a financial business corporation as defined in the Corporation Business Tax Act.

(g) "Regulated investment company" shall mean any corporation which for a period covered by its report, is registered and regulated under the Investment Company Act of 1940 (54 Stat. 789), as amended.

(h) "Taxpayer" shall mean any corporation required to report or to pay taxes, interest or penalties under this act.

(i) "Fiscal year" shall mean an accounting period ending on any day other than the last day of December on the basis of which the taxpayer is required to report for federal income tax purposes.

(j) Except as herein provided, "privilege period" shall mean the calendar or fiscal accounting period for which a tax is payable under this act.

(k) "Entire net income" shall mean total net income from all sources, whether within or without the United States, and shall include the gain derived from the employment of capital or labor, or from both combined, as well as profit gained through a sale or conversion of capital assets. For the purpose of this act, the amount of a taxpayer's entire net income shall be deemed prima facie to be equal in amount to the taxable income, before net operating loss deduction and special deductions, which the taxpayer

is required to report to the United States Treasury Department for the purpose of computing its federal income tax; provided, however, that in the determination of such entire net income,

(1) Entire net income shall exclude 100% of dividends which were included in computing such taxable income for federal income tax purposes, paid to the taxpayer by one or more subsidiaries owned by the taxpayer to the extent of the 80% or more ownership of investment described in subsection (d) of this section. With respect to other dividends, entire net income shall not include 50% of the total included in computing such taxable income for federal income tax purposes;

(2) Entire net income shall be determined without the exclusion, deduction or credit of:

(A) The amount of any specific exemption or credit allowed in any law of the United States imposing any tax on or measured by the income of corporations;

(B) Any part of any income from dividends or interest on any kind of stock, securities or indebtedness, except as provided in subsection (k) (1) of this section;

(C) Taxes paid or accrued to the United States on or measured by profits or income, or the tax imposed by this act, or any tax paid or accrued with respect to subsidiary dividends excluded from entire net income as provided in subsection (k) (1) of this section;

(D) Net operating losses sustained during any year or period other than that covered by the report;

(E) 90% of interest on indebtedness owing directly or indirectly to holders of 10% or more of the aggregate outstanding shares of the taxpayer's capital stock of all classes; except that such interest may, in any event, be deducted

(i) Up to an amount not exceeding $1,000.00;

(ii) In full to the extent that it relates to bonds or other evidences of indebtedness issued, with stock, pursuant to a bona fide plan of reorganization, to persons, who, prior to such reorganization, were bona fide creditors of the corporation or its predecessors, but were not stockholders or shareholders thereof;

(iii) In full to the extent that it relates to debt of a financial business corporation owed to an affiliate corporation; provided that such interest rate does not exceed 2% over prime rate; the prime rate to be determined by the Commissioner of Banking;

(iv) In full to the extent that it relates to financing of motor vehicle inventory held for sale to customers providing said

indebtedness is owed to a taxpayer customarily and routinely providing this type of financing;

(v) In full to the extent it relates to debt of a banking corporation to a bank holding company, as defined in 12 U. S. C. § 1841, of which the banking corporation is a subsidiary.

(3) The commissioner may, whenever necesary to properly reflect the entire net income of any taxpayer, determine the year or period in which any item of income or deduction shall be included, without being limited to the method of accounting employed by the taxpayer.

(l) "Real estate investment trust" shall mean any unincorporated trust or unincorporated association qualifying and electing to be taxed as a real estate investment trust under federal law.

(m) "Financial business corporation" shall mean any corporate enterprise which is (1) in substantial competition with the business of national banks and which (2) employs moneyed capital with the object of making profit by its use as money, through discounting and negotiating promissory notes, drafts, bills of exchange and other evidences of debt; buying and selling exchange; making of or dealing in secured or unsecured loans and discounts; dealing in securities and shares of corporate stock by purchasing and selling such securities and stock without recourse, solely upon the order and for the account of customers; or investing and reinvesting in marketable obligations evidencing indebtedness of any person, copartnership, association or corporation in the form of bonds, notes or debentures commonly known as investment securities; or dealing in or underwriting obligations of the United States, any state or any political subdivision thereof, or of a corporate instrumentality of any of them. This shall include, without limitation of the foregoing business commonly known as industrial banks, dealers in commercial paper and acceptances, sales finance, personal finance, small loan and mortgage financing businesses, as well as any other enterprise employing moneyed capital coming into competition with the business of national banks; provided, that the holding of bonds, notes, or other evidences of indebtedness by individual persons not employed or engaged in the banking or investment business and representing merely personal investments not made in competition with the business of national banks, shall not be deemed financial business. Nor shall "financial business" include national banks, production credit associations organized under the Farm Credit Act of 1933, stock and mutual insurance companies duly authorized to transact business in this State, security brokers or dealers or investment companies or bankers not employing moneyed capital coming into competition with the business of naitonal banks, real

estate investment trusts, or any of the following entities organized under the laws of this State: credit unions, savings banks, savings and loan and building and loan associations, pawnbrokers, and State banks and trust companies.

2. Section 5 of P. L. 1945, c. 162 (C. 54:10A–5) is amended to read as follows:

5. The franchise tax to be annually assessed to and paid by each taxpayer shall be the sum of the amount computed under subsection (a) hereof, or, in the alternative to the amount computed under subsection (a) hereof, the amount computed under subsection (f) hereof, and the amount computed under subsection (c) hereof:

(a) That portion of its entire net worth as may be allocable to this State as provided in section 6 multiplied by the following rates: 2 mills per dollar on the first $100,000,000.00 of allocated net worth; 1/10 of a mill per dollar on the second $100,000,000.00; 3/10 of a mill per dollar on the third $100,000,000.00; and 2/10 of a mill per dollar on all amounts of allocated net worth in excess of $300,000,000.00; *provided, however, that with respect to reports covering accounting or privilege periods set forth below, the rate shall be that percentage of the rate set forth in this subsection for the appropriate year:*

Accounting or Privilege Periods Beginning on or After:	*The Percentage of the Rate to be Imposed Shall Be:*
April 1, 1983	*75%*
July 1, 1984	*50%*
July 1, 1985	*25%*
July 1, 1986	*0*

(b) (Deleted by amendment, P. L. 1968, c. 250, s. 2.)

(c) 3¼% of its entire net income or such portion thereof as may be allocable to this State as provided in section 6; provided, however, that with respect to reports covering accounting or privilege periods or parts thereof ending after December 31, 1967, the rate shall be 4¼%; and, that with respect to reports covering accounting or privilege periods or parts thereof ending after December 31, 1971, the rate shall be 5½%; and, that with respect to reports covering accounting or privilege periods or parts thereof ending after December 31, 1974, the rate shall be 7½%; and, that with respect to reports covering accounting or privilege periods or parts thereof ending after December 31, 1979, the rate shall be 9%.

(d) Provided, however, that the franchise tax to be annually assessed to and paid by any investment company or regulated investment company or real estate investment trust which has elected to report as such and has filed its return in the form and

within the time provided in this act and the rules and regulations promulgated in connection therewith, shall, in the case of an investment company, be measured by 25% of its entire net income and 25% of its entire net worth, and, in the case of a regulated investment company or a real estate investment trust, by 4% of its entire net income and 15% of its entire net worth, at the rates hereinbefore set forth for the computation of tax on net income and net worth, respectively, but in no case less than $250.00.

(e) The tax assessed to any taxpayer pursuant to [subsection (a) of] this section shall not be less than [the greatest of

(i) 5/10 of a mill per dollar on the first $100,000,000.00 and 2/10 of a mill per dollar on all amounts in excess of $100,000,000.00 of the average of the taxpayer's real and tangible personal property within the State allocated to this State in accordance with paragraph (A) of section 6 hereof (in the case of a taxpayer which does not maintain a regular place of business outside this State other than a statutory office, the allocation shall be 100%); or

(ii) In the case of a domestic corporation, the least of the amounts prescribed by subparagraphs (aa) or (bb) or (cc) of this subsection (e);

(aa) An amount measured by the number of shares which the taxpayer is authorized to issue as follows: where authorized capital stock does not exceed 5,000 shares $25.00; where the authorized capital stock is in excess of 5,000 shares but does not exceed 10,000 shares $55.00; and where the authorized capital stock exceeds 10,000 shares, for the first 10,000 shares $55.00 and for each additional 10,000 shares or part thereof, $27.50; or

(bb) 11/100 of a mill per dollar on the total assets of the corporation; or

(cc) $100,000.00; or

(iii) $25.00 in the case of a domestic corporation or $50.00 in the case of a foreign corporation] *$25.00 in the case of a domestic corporation, $50.00 in the case of a foreign corporation, or $250.00 in the case of an investment company or regulated investment company.*

(f) In lieu of the portion of the tax based on net worth and to be computed under subsection (a) of this section, any taxpayer, the value of whose total assets everywhere, less reasonable reserves for depreciation, as of the close of the period covered by its report, amounts to less than $150,000.00, may elect to pay the tax shown in [the following table:

	If total assets are at least	But less than	The Tax shall be For domestic corporations	For foreign corporations
81	$0 00	$18,000 00	$25 00	$50 00
82	18,000 00	22,000 00	31 00	50 00
83	22,000 00	26,000 00	37 00	50 00
84	26,000 00	30,000 00	43 00	50 00
85	30,000 00	34,000 00	49 00	50 00
86	34,000 00	38,000 00	55 00	55 00
87	38,000 00	42,000 00	61 00	61 00
88	42,000 00	46,000 00	67 00	67 00
89	46,000 00	50,000 00	73 00	73 00
90	50,000 00	54,000 00	79 00	79 00
91	54,000 00	58,000 00	85 00	85 00
92	58,000 00	62,000 00	91 00	91 00
93	62,000 00	66,000 00	97 00	97 00
94	66,000 00	70,000 00	103 00	103 00
95	70,000 00	74,000 00	109 00	109 00
96	74,000 00	78,000 00	115 00	115 00
97	78,000 00	82,000 00	121 00	121 00
98	82,000 00	86,000 00	127 00	127 00
99	86,000 00	90,000 00	133 00	133 00
100	90,000 00	94,000 00	139 00	139 00
101	94,000 00	98,000 00	145 00	145 00
102	98,000 00	102,000 00	151 00	151 00
103	102,000 00	106,000 00	157 00	157 00
104	106,000 00	110,000 00	163 00	163 00
105	110,000 00	114,000 00	169 00	169 00
106	114,000 00	118,000 00	175 00	175 00
107	118,000 00	122,000 00	181 00	181 00
108	122,000 00	126,000 00	187 00	187 00
109	126,000 00	130,000 00	193 00	193 00
110	130,000 00	134,000 00	199 00	199 00
111	134,000 00	138,000 00	205 00	205 00
112	138,000 00	142,000 00	211 00	211 00
113	142,000 00	146,000 00	217 00	217 00
114	146,000 00	150,000 00	223 00	223 00]

115 *a table which shall be promulgated by the director.*

1 3. This act shall take effect immediately; provided, however, that
2 the amendment contained in section 1 with respect to subsection
3 (d) of section 4 of P. L. 1945, c. 162 (C. 54:10A–4) relating to
4 indebtedness shall become effective with respect to accounting or
5 privilege periods beginning on or after July 1, 1984 and the

amendments contained in section 2 with respect to subsection (e) of section 5 of P. L. 1945, c. 162 (C. 54:10A–5) relating to alternative minimum taxes shall be effective with respect to accounting periods beginning on and after April 1, 1983.

STATEMENT

This bill would provide substantial reductions in the Corporation Business Tax Act. The following are the major components of this reduction proposal:

1. The net worth tax would be phased out over a period of 4 years.

2. The provisions which require indebtedness to be added back to net worth for certain shareholders would be repealed.

A1662 (1982)

from NJ Economic Policy Council and Office of Economic Policy 13th annual report

IX

BUSINESS TAXES AND REGIONAL ECONOMIC GROWTH*

The effects of state business taxes on regional economic growth have been the subject of considerable interest both within and outside the State. In particular, the Northeastern states' relative decline during the decade of the 1970s appears to have persuaded many people of the desirability of improving the business climate in this area.

However, studies attempting to account for the quantitative effects of business tax structure on regional economic growth have been fragmentary. There have been studies on the implications of business taxes on business location using a comparison of tax burdens, but the total effect of business taxation on regional economic growth has not yet been quantitatively documented.[1]

In this paper, an aggregate model of interregional factor migration and economic growth is developed and tested. Section I discusses the role of capital accumulation on economic growth, and Section II deals with the theoretical issues involving business taxes and interregional factor mobility and develops an aggregate model for econometric analysis. Section III presents the statistical estimation results of the model, and Section IV applies the results of Section III to the examples relevant to New Jersey's economy. Section V summarizes the findings of the study.

I. Capital Accumulation and Economic Growth

There exist many theories explaining differences in regional growth rates. In the earlier stage of United States economic development, initial endowments of natural resources and locational advantages were considered to be the dominant factors in regional economic growth.

However, as transportation-communication technology improved and the industrial structure became more sophisticated, those initial advantages became less important, and increased factor mobility enabled the relatively less developed regions to reduce the gap between their per capita income levels and the national average. This process, known as the equalization of per capita income, does not fully account for the differences in regional growth rates.[2]

Although the equalization process is an important factor in explaining regional growth rate differences, there exist other reasons for interregional factor movements; e.g., climate, congestion, and cultural amenities influence migration of labor force, while taxes, labor

* For explanation of variables, see p. 60.
NOTE: Numbers in parentheses are the t-statistics.

* Prepared by Dr. Jong Keun You, Office of Economic Policy.

[1] For studies relating taxes and business location see, for example, NJMA (1974), Nagle (1976) and Singer (1979).

[2] This conclusion is made on the basis of earlier studies of the equalization process cited in this paper and the empirical evidence presented in this study.

union strength and business regulations affect the region's capital investment.

While the above factors are well recognized as potentially important determinants of regional economic growth, empirical studies attempting to measure their quantitative impact have been scarce. Some of the studies of regional growth appearing in economic literature are those by Borts and Stein (1964), Smith (1974, 1975), and Ghali, Akiyama and Fujiwara (1978). These studies, however, fail to introduce taxes and other exogenous factors to explain factor mobility and, instead, limit their analysis to the role that wages and rates of return to capital play in the equalization process.

In order to account for the contribution of each factor to the growth of output of a given region, let us first assume that regional output is determined by the amount of capital and labor in the form of the following equation:[3]

$$Y_i^* = a_0 + a_1 L_i^* + a_2 K_i^* \qquad (1)$$

where an asterisk denotes the rate of change in the variable; Y, L, and K stand for output, labor, and capital, respectively, and the subscript i refers to region i. The intercept a_0 then measures the growth of output due to technological progress, and the parameters a_1 and a_2 are elasticities of output with respect to labor and capital, respectively.[4]

In the United States, the technical progress component accounted for about two percent growth per annum during the post-war period. This component, however, has been slowing since the early seventies. Growth of capital stock accounts for about one percentage point of GNP growth, and the increase in man-hours accounts for another percentage point growth or slightly less. Thus, the total effect had been about four percent growth per year on the average during the sixties, but it fell to 3.5 percent by the mid-seventies.

Therefore, capital accumulation accounted for at least one-fourth to one-third of the GNP growth rate. If new technologies are embodied in new capital goods as suggested by Solow (1962), and, therefore, the rate of technical progress is influenced by the rate of growth of capital stock, then the accumulation of capital may account for more than one-third of the total growth rate; perhaps as much as three-quarters. The empirical evidence on the embodiment hypothesis is, however, not very strong.[5]

Since increases in employment are not likely to be an important source of economic growth for New Jersey in the 1980's due to its relatively slower growing population, the key to the State's economic growth lies in capital investment, and this is especially so if the embodiment hypothesis holds true.

II. Business Taxes and Capital Theory

Given the importance of capital accumulation to New Jersey's economic growth, what is the effect of the corporate income tax on capital investment? The analysis can be based on the theory of optimal capital accumulation developed by Jorgenson (1963).

According to Jorgenson's theory of optimal capital accumulation, capital investment is affected by the *user cost of capital*, which is composed of *depreciation*, *interest*, and *corporate income tax* adjusted for the investment tax credit and accelerated depreciation for tax purposes. Thus, if everything else remains constant, an increase in the corporate income tax rate will increase the user cost of capital, which will, in turn, bring about a decrease in capital investment.

Although there is virtually unanimous agreement on the theoretical relationship between the corporate income tax rate and the demand for

[3] This is the same approach employed by Ghali, *et. al.* Growth accounting with the use of an aggregate production function has been fruitfully applied to United States data; e.g., Solow (1959) and You (1979). A non-econometric growth accounting method pioneered by Denison (1962) also implicitly uses the concept of an aggregate production function.

[4] To be more precise, the constant term (a_0) represents the effects of all factors other than capital and labor inputs. Undoubtedly, technical progress is an important part of a_0, but it may include many other important factors. For this reason, some economists call a_0 a measure of our ignorance.

[5] For econometric studies on the embodiment hypothesis, see Solow (1962), Wickens (1973), Smallwood (1970), and You (1976).

capital goods (and thus investment) represented by the negative sign of the elasticity, its empirical significance has been subject to a heated debate. While Jorgenson and other neoclassical economists believe the user cost of capital has a significant effect on capital investment, Keynesian economists, headed by Eisner, argue that the effect is insignificant.

The debate can be best understood by the use of the following equation:

$$K_d = AQ\,(c/p)^{-s} \qquad (2)$$

where K_d is the desired capital stock, A a constant, Q the level of demand (expected demand) for output, c the user cost of capital, p the price of output, and s the elasticity of substitution between capital and labor inputs.[6]

The empirical estimates of s are subject to considerable variation depending on the specification, estimation technique, and data.[7] If s is equal to zero, demand for capital investment will be proportional to the *change* in demand for output, while changes in the user cost of capital have no effect on capital investment.

The argument by the Keynesians that corporate income tax changes have an insignificant effect on capital investment seems to have caught the attention of some legislators and other policy makers. Notice, however, that the debate concerns a national parameter. While the user cost of capital may or may not be important at the national level depending on the degree to which factors of production can be substituted in response to changes in the relative cost of inputs, there is little doubt that regional variations in the user cost of capital can have a significant effect on regional capital accumulation, since they involve, in addition to technical substitution of inputs, substitution of one location for another.

It has been pointed out earlier that the user cost of capital depends on many parameters including tax rates. For the purpose of an interregional comparison of capital accumulation, those parameters nationally determined and, hence, common to all regions can be treated as constants. In other words, interregional differences in the user cost of capital are determined by interregional differences in corporate income tax rates, investment tax credits, property tax rates, *etc.* Therefore, growth rates of the regional capital stock can be assumed to be determined by the following equation:

$$K_i^* = f\,(T, X) \qquad (3)$$

where T is a vector of regional tax variables and X a vector of non-tax variables relevant to regional capital accumulation.

Since capital stock data at the regional level are not available, equation (3) cannot be directly tested. However, an indirect test can be performed by substituting equation (3) into (1) and thus estimating a semi-reduced form equation. Similarly, an equation explaining the growth of employment could be introduced. However, since the purpose of this study is to investigate the effects of business taxes on New Jersey's economic growth, and since data for the change in employment (L^*) are available, such an equation is not necessary. Furthermore, estimation of a semi-reduced form equation can facilitate comparisons of the estimated coefficient of L^* with previous estimates by other studies.

III. Data and Estimation Results

For the precise specification of equation (3), all tax *rates* determined at the state and local level are initially considered. However, because of substantial variations in rates within regions depending on the levels of net income and also variations in the treatment of investment tax credit, loss carry over, *etc.*, a single measure of *effective tax rate on corporate net income* and a single measure of *effective property tax rate* are used in this study.

[6] The elasticity of substitution is a measure of technical flexibility in substituting capital for labor (or labor for capital) in response to changes in user cost of capital or wage rate. Zero elasticity of substitution means it is technically not feasible to substitute one input for the other no matter what the relative cost of inputs.

[7] For empirical studies of investment demand, see Jorgenson (1963), Hall and Jorgenson (1967), Eisner and Nadiri (1968), Bischoff (1969), and Eisner (1978).

The effective corporate income tax (CIT) rate is measured by the ratio of total CIT revenue of a state to the state's total labor and proprietors' income by place of work. Ideally, the denominator should be the state's total corporate income, but the lack of suitable data forced the use of this proxy.

As for the effective property tax (PT) rate, the available data cannot be separated between the business property taxes and others. Also, the unreliability of assessed values made the conventional definition of property tax rate inappropriate for this study. Hence, a surrogate measure, defined as the ratio of total PT revenues of state and local governments to the state's total personal income, is used.

In addition to the above tax variables, two other variables are introduced to equation (3). They are relative wage rates defined as the ratio of average hourly earnings of production workers in a state's manufacturing industries to the national average, and the share of manufacturing, defined as the ratio of employment in the state's manufacturing industries to the state's total nonagricultural employment.

The qualitative effect of increases in the relative wage rate cannot be determined *a priori*. The substitution effect increases the use of capital to replace relatively expensive labor, while the output effect and locational effect reduce the investment. However, if the elasticity of substitution is close to zero, the output and locational effects will dominate the substitution effect, and a higher relative wage rate will lower the growth rate of capital.

The reason for adding the share of manufacturing to the equation is that the growth of manufacturing industries has been, on the average, substantially slower than that of other industries. Since the manufacturing sector still remains a very important sector of the economy in terms of its share of total employment, states with a greater concentration of manufacturing industries would tend to suffer more than proportionally from the declining national trend and, as a result, there would be less reinvestment and expansion in those areas.

Assume a linear function for equation (3):

$$K_i^* = b_0 - b_1 CIT_i - b_2 PT_i - b_3 W_i - b_4 M_i \qquad (3')$$

where W and M are, respectively, relative wage rate and share of manufacturing employment. Substitution of (3′) into (1) yields the semi-reduced form equation:

$$Y_i^* = (a_0 + a_2 b_0) + a_1 L_i^* - a_2 b_1 CIT_i - a_2 b_2 PT_i - a_2 b_3 W_i - a_2 b_4 M_i \qquad (4)$$

The dependent variable is defined as the total growth of state's personal income over the 1970-77 period. Similarly, the L* term is defined as the total growth over the same period, i.e.,

$$Y^* = (Y_{77} - Y_{70})/Y_{70}$$
$$L^* = (L_{77} - L_{70})/L_{70}$$

where Y is the personal income in real terms and L the total employment. Ideally, Y* should be defined as the growth of gross state product (GSP), but the unavailability of reliable GSP data forced the use of personal income instead. Although personal income includes such received incomes as transfer payments and incomes earned outside the region by residents of the region, if the proportion of those incomes in total personal income remains fairly constant, the growth rates of personal income will be a good approximation of the growth rates of gross state product. All data are obtained from the *Statistical Abstract of the United States* (Bureau of the Census, various issues.)

Estimation results for the semi-reduced form equation using data for 48 states of the continental U.S. are given below:

$$Y^* = 0.5360 + 0.6307L^* - 6.0608CIT - 2.8260PT - 0.0838W - 0.3566M \qquad (5)$$
$$(5.597) \quad (6.220) \quad (2.189) \quad (3.646) \quad (1.035) \quad (2.830)$$
$$R^2 = 0.75 \qquad F_{(5,42)} = 25.86$$

where CIT and PT are corporate income tax rate and property tax rate as defined above and averaged over the period of 1970-77, W the rela-

tive wage rate in 1970, M the share of manufacturing in 1970. The figures in parentheses are t-statistics.

Equation (5) shows an impressive explanatory power ($R^2 = .75$) compared to earlier studies by Smith and Ghali, *et al.*[8] All the estimated coefficients have the expected sign and are statistically significant (at .05) except for the wage rate term.

IV. Interpretations and Applications of the Results

Equation (5) yields 0.63 for the estimate of the elasticity of output with respect to labor, which is close to the consensus range of 0.65 to 0.75. This implies that the other terms in the equation, namely, relative wage rate, manufacturing share, corporate income tax rate, and property tax rate, reliably account for the effects of capital accumulation, as hypothesized by equation (3).

If we assume constant returns to scale, a_1 and a_2 of equation (1) must add up to unity; i.e., $a_2 = 1 - a_1 = 0.3693$. Then the implicit estimation of equation (3′) can be derived from equation (5) and is given by the following:[9]

$$K^* = \text{constant} - 0.2269W - 0.9656M - 16.411CIT - 7.6523PT \quad (6)$$

Since returns to scale may not be constant, and since the estimate of output elasticity with respect to labor is likely to contain some sampling errors, equation (6) is much less reliable for measuring the quantitative effects of the tax variables on capital accumulation than is equation (5) for measuring the ultimate effects of those same variables on income growth. Nevertheless, equation (6) clearly demonstrates the negative effects of corporate income tax and property tax on the accumulation of capital.[10]

Whatever the quantitative effects of CIT and PT on the growth of capital, their ultimate effects on the growth of regional income are represented by their coefficients given in equation (5). Specifically, an increase of CIT by one percentage point would reduce the growth rate of regional income by slightly over six percentage points over a seven year period, or about 0.9 percentage point per annum. Note, however, that CIT is defined as the ratio of total corporate income tax revenue to the region's total labor and proprietors' income, not the legal definition of tax rate. Similarly, an increase by one percentage point in PT (percent of total personal income paid for property tax) would eventually reduce the growth rate of region's personal income by slightly less than three percentage points over a seven year period, or about four-tenths of a percentage point per annum.

These estimates can be applied to a recent proposal to substitute an *ad valorem* tax on gasoline for a reduction of the State's corporate income tax. Specifically, the proposal is to change the current excise tax on gasoline sales to an *ad valorem* tax (or sales tax) and, in exchange for the anticipated increase in tax revenue from that change, to reduce the corporate income tax rate from the current 9 percent to 7.5 percent.

The proposed corporate income tax reduction, when compared to the available tax revenue data, is expected to result in a decrease in the ratio of corporate income tax revenue to the State's total labor and proprietors' income by about 0.2 percentage point. Since a point decrease in CIT increases the *annual* growth rate of the State's personal income by 0.9 point, the proposed reduction in CIT is expected to increase New Jersey's average annual growth rate in real personal income by about 0.15 of a percentage point. Furthermore, as a result of in-

[8] The coefficient of determination (R^2) of equation (5) cannot be directly compared to those obtained by Smith and Ghali *et. al.* because of the difference in data (Ghali *et. al.*) and in the dependent variable (Smith). Nevertheless, the R^2 of equation (5) is substantially higher than 0.486 (Ghali *et. al.*) or (Smith) 0.17 to 0.67.

[9] The constant term cannot be derived implicitly. Other coefficients are derived by dividing the coefficients of equation (5) by a_2 (0.3693) since they are products of a_2 and b's. See equation (4).

[10] Equation (6) implies that, for example, a reduction in CIT rate (as defined in this study) by one percentage point will increase growth of regional capital by 16.4 percentage points over a seven year period.

creased growth in the State's real personal income, the State's tax revenue will increase over time faster than it would have without the proposed tax reform.

The proposed change in gasoline tax from the excise tax to an *ad valorem* tax will encourage gasoline conservation,[11] while the compensating rollback of the corporate income tax rate will improve New Jersey's business conditions. The proposal for a tax structure reform, therefore, is an idea that deserves serious consideration. Another alternative is to *eliminate the net-worth tax,* which is similar in nature to the corporate income tax but regressive and discourages capital investment in the State.

Net-worth tax revenues have been fairly stable over the past decades, reflecting the fact that no significant net capital investment has been made in the State over that period. As demonstrated by the study described in the preceding section, insufficient investment in the State is partly a result of our business-tax structure, of which the net-worth tax is a significant component.

Abolition of the net-worth tax would reduce revenues by approximately $75 million per year. On the other hand, a 10 percent sales tax on gasoline will more than compensate for the lost revenues, since the increase in gasoline-tax receipts is expected to exceed $100 million per year and, unlike the net-worth tax, will grow over time.

The next alternative is to return the corporate income tax rate to 7.5%. This would reduce revenues by about $80 to $90 million per year (but the initial year's loss would be about $130 to $140 million because of the reduction in prepayment in the first year). Since the initial year's loss in revenues may not be fully compensated by the extra revenues from the gasoline tax, a two-step reduction (to 8% in the first year and to 7.5% in the second year) of the corporate income tax rate would prevent revenue losses arising from such change.

The third preference is to change the flat corporate income tax rate to a progressive system, not by raising the rate for large amounts of profits, but by reducing the rate for small amounts. This change would certainly improve the State's business climate, but not by as much as the abolition of the net-worth tax or the uniform reduction of the corporate income tax rate.

IV. Summary and Conclusions

In this paper a model of interregional factor mobility is developed and applied in order to estimate the effects of tax differentials at the State level on income growth. The study confirms the hypothesis that tax differentials are a significant factor in determining the rate of growth of capital and thus the rate of growth of income.

Among the variables that affect capital accumulation at the State level, the corporate income tax rate appears to be most significant in terms of its quantitative impacts on income growth. Property tax rate, relative wage rate and manufacturing share also have negative effects on income growth, but the effect of relative wage rates is not statistically significant. In any case, recent developments in the New Jersey economy, i.e., decline in the relative wage rate (from 103 percent of U.S. average in 1970 to 100.5 percent in 1978) and in manufacturing share (from 33.1 percent of total non-agricultural employment in 1970 to 26.3 percent in 1979) should be beneficial to the State's economy. On the other hand, the recent increase in corporate income tax rate will have an adverse effect.

The results of this study show that the proposed rollback of the corporate income tax rate in return for a compensating increase in the gasoline tax will increase the average annual growth rate of New Jersey's real personal income by about 0.15 percentage point. Since the proposed change in the gasoline tax from the current excise tax to an *ad valorem*

[11] For empirical evidence on this effect, see Chapter VI of this *Report*.

tax will also encourage gasoline conservation, the proposal is an important positive step toward improving New Jersey's business conditions. However, an elimination of the net-worth tax is considered to be a better alternative, but, if neither of the two alternatives is feasible, changing the flat corporate income tax rate to a progressive system by reducing the rate for small amounts of profits ought to be considered as a third alternative.

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from NJ Economic Policy Council and Office of Economic Policy 14th annual report

VII

CAPITAL FORMATION AND BUSINESS TAXES*

Introduction

Increased capital formation and productivity growth are the key requirements for solving many of the recent economic problems confronting the United States. The same issues have their special dimension in New Jersey, because capital formation in New Jersey has been lagging behind the national pace.

The significance of capital formation in promoting technical progress is twofold. First, an increase in the capital-labor ratio, i.e., each person working with more capital as in the case of automation or computerization, will mean more output per worker. Second, new technologies are often introduced by using new equipment, i.e., through new capital expenditures. For these two reasons, we single out capital formation as the most important source of productivity growth.

Aggregate Trends in Capital Formation in New Jersey

The extent of underinvestment in New Jersey can be seen from Table VII.1. Throughout the entire period of 1958-1977, New Jersey's manufacturing sector as a whole spent smaller percentages of its value added for capital investment than the national averages (see column 7). This implies that the manufacturing capital stock in New Jersey was not growing as fast as the national stock. Consequently, slower expansion of manufacturing employment in New Jersey than in the U.S. has been observed during the period of 1958-77 (2.2% vs. 26.7% according to manufacturing census data).

The comparisons shown in Table VII.1 may overstate the extent of underinvestment in New Jersey because of the State's industry mix. For example, the chemical industry group accounted for 30.5% of total value added of the State's manufacturing sector in 1977. Since the State's chemical industry group invested substantially less than the national average for the same group, which accounted for only 11.4% of the national total of value added, the aggregate investment ratio for New Jersey will appear to be low even though there might be many New Jersey industries which invested proportionately more than the national ratios.

Table VII.2 shows the 1977 ratios of new capital expenditures to value added for 19 major manufacturing industries at the two-digit level for both the U.S. and New Jersey. The distribution of investment ratios shows the systematic pattern of underinvestment in New Jersey. For example, only three out of 19 industry groups (Textile Mill Products, Petroleum and Coal Products, Leather and Leather Products) showed higher investment ratios in New Jersey than in the U.S., while the rest shows relative underinvestment.[1]

* Prepared by Jong Keun You, Research Economist, Office of Economic Policy.

[1] The probability of three (or less) out of 19 in a non-systematic sample (i.e., determined randomly with 50-50 chances) is less than 0.3%. Therefore, we conclude that New Jersey's under-investment is a systematic phenomenon.

TABLE VII.1

CAPITAL EXPENDITURE-VALUE ADDED RATIOS

New Jersey versus United States Manufacturing Sectors

Year	New Jersey C.E.*	New Jersey V.A.**	New Jersey Ratio (1:2)	United States C.E.	United States V.A.	United States Ratio (4:5)	NJ Ratio / US Ratio
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1977	1502	23,165	.065	47,687	581,641	.082	.791
76	1216	20,288	.060	40,770	511,471	.080	.752
75	1200	17,741	.068	37,262	442,486	.084	.803
74	1203	18,394	.065	35,696	452,468	.079	.829
73	955	17,754	.054	26,979	405,624	.067	.809
72	940	16,409	.057	24,073	353,974	.068	.842
71	798	14,394	.055	20,941	314,138	.067	.832
70	902	14,414	.063	22,164	300,227	.074	.848
69	933	14,362	.065	22,291	304,441	.073	.887
68	765	13,503	.057	20,613	285,059	.072	.783
67	824	12,738	.065	21,503	261,984	.082	.788
66	776	12,246	.063	20,235	250,880	.081	.786
65	617	11,269	.055	16,615	226,940	.073	.748
64	502	10,217	.049	13,294	206,194	.064	.762
63	525	9,957	.053	11,370	192,083	.059	.891
62	533	9,495	.056	10,436	179,071	.058	.963
61	468	8,758	.053	9,780	164,281	.060	.898
60	473	8,632	.055	10,098	163,999	.062	.890
59	436	8,354	.052	9,140	161,535	.057	.922
58	450	7,500	.060	9,544	141,541	.067	.890

* C.E. = Capital Expenditures in millions of dollars.

** V.A. = Value Added in millions of dollars.

SOURCES: U.S. Department of Commerce, *Census of Manufactures* and *Annual Survey of Manufactures,* various issues.

Capital Formation Trends at the Industry Level

In order to examine the investment performance of the New Jersey industries at a more disaggregated level, all four-digit industries of New Jersey with investment data available have been compared with the same industries of the U.S. for the manufacturing census years of 1958, 1967 and 1977. In 1958, 73 of the 185 New Jersey industries (39.5%) in the sample showed higher investment ratios than the national ratios. This is significantly less than 50% which would be the expected proportion if there was no systematic difference between the New Jersey and national ratios. In 1967 the fraction of New Jersey industries showing higher investment ratios than the national averages was down to 28.8% (55 out of 191), indicating a deepening erosion of New Jersey's manufacturing sector.[2]

The worsening of the New Jersey industries investment performance in 1967 was followed by a negative trend in manufacturing employment in the State from 1969 to 1975. A reversal of this trend took place in 1976, and the 1977 census data (the most recent available) show an improvement in New Jersey's investment ratios. Of the 181 industries for which 1977 data are available, 66 (36.5%) show higher investment ratios for New Jersey than the U.S.[3] Although the percentage had not returned to the 1958

[2] The decrease from 1958 to 1967 in the fraction of New Jersey industries showing investment ratios higher than the national ratios is statistically significant at the 5% level.

[3] The increase in the percentage (from 28.8% to 36.5%) is significant at the 6% level, although not at the conventional 5% level.

TABLE VII.2

CAPITAL EXPENDITURE-VALUE ADDED RATIOS FOR 19 MAJOR MANUFACTURING INDUSTRIES, 1977

Industry	New Jersey C.E.*	New Jersey V.A.**	New Jersey Ratio (1:2) Percent	United States C.E.	United States V.A.	United States Ratio (4:5) Percent
	(1)	(2)	(3)	(4)	(5)	(6)
Food & Kindred Products	108.5	1196.4	9.07	4191.9	56232.8	7.45
Textile Mill Products	10.8	133.1	8.11	1220.9	15965.2	7.65
Apparel & Other Textile Products	15.8	852.9	1.85	442.9	19448.1	2.28
Lumber & Wood Products	5.7	120.8	4.72	1552.5	16168.0	9.60
Furniture & Fixtures	6.4	191.7	3.34	387.2	8797.5	4.40
Paper & Allied Products	83.9	842.2	9.96	3279.6	21699.4	15.11
Printing & Publishing	57.8	1166.0	4.96	1587.2	31543.6	5.03
Chemicals & Allied Products	438.0	6189.0	7.08	8488.9	56522.5	15.02
Petroleum & Coal Products	62.8	209.5	29.98	2317.5	16223.7	14.28
Rubber & Miscellaneous Plastic Products	72.4	991.0	7.30	1631.7	19834.3	8.23
Leather & Leather Products	3.7	120.0	3.08	92.5	3650.5	2.53
Stone, Clay & Glass Products	65.8	921.9	7.14	1774.4	18800.1	9.44
Primary Metal	37.2	708.7	5.25	4526.3	37298.2	12.14
Fabricated Metal	83.4	1710.0	4.88	2542.1	44943.0	5.66
Machinery Except Electrical	85.1	1750.6	4.86	4447.1	67406.0	6.60
Electric & Electronic Equipment	88.3	1929.6	4.58	2833.2	49708.3	5.70
Transportation Equipment	62.6	1174.9	5.33	4769.0	64166.4	7.43
Instruments	39.4	885.7	4.45	959.5	18692.1	5.13
Miscellaneous Manufacturing	26.4	596.5	4.43	461.5	10197.7	4.53
Total	1373.9	22830.6	6.02	47505.9 (47687.4)†	577297.4 (581640.9)†	8.23 (8.20)†

SOURCE: U.S. Department of Commerce, *Census of Manufactures*, 1977.

* C.E. = Capital Expenditures in millions of dollars.

** V.A. = Value added in millions of dollars.

† Figures in the parentheses include Tobacco Products industry, which does not exist in New Jersey.

level, the investment performance of the New Jersey industries in 1977 was better than in 1958 —in terms of the standardized ratio to be explained below.

The low investment ratios of New Jersey's chemical industries tend to lower the State's aggregate investment ratio relative to the national ratio because of the industries' domination of the New Jersey manufacturing sector. In order to neutralize the industry-mix effect on the aggregate ratio, a standardized investment ratio was computed for New Jersey. Standardization assumes the distribution of value added among the four-digit industries of New Jersey is the same as the national distribution, and using this distribution as the weights, computes the weighted average of the industry level investment ratios. The standardized investment ratio for the group of 181 industries in 1958 was 4.8% compared to 5.5% for the non-standardized ratio, and 6.3% for the U.S. In other words, the New Jersey industry mix in 1958 had the effect of raising the average investment ratio, or, to say the same thing, New Jersey's average ratio appeared better than the standardized ratio. The same phenomenon could be observed from the 1967 data; the national ratio was 7.6%, New Jersey's non-standardized ratio 6.1%, and the standardized ratio was 5.8%.

The effect of standardization in 1977, however, reverses the phenomenon observed in 1958 and 1967. The national ratio was 8.3% and the non-standardized New Jersey ratio 5.8% compared to 8.0% for the standardized ratio. In other words, New Jersey's manufacturing industries investment appears better if we take account of the industry-mix effect. Of course, the fact that important industries like chemicals did not invest proportionately as much as the national average is no cause for joy, but neither is it a cause for despair. The chemical industries in New Jersey are still healthy. However, it is also important that the chemical industries avoid the employment decline of the last ten years experienced by other manufacturing industries of the State. In sum, the investment performance of the New Jersey industries in 1977 was a significant improvement over 1967, although more gains must be made to reach the national level.

Implications of the Trends

The above analysis lead to the conclusion that, despite some improvement in 1977, New Jersey's capital formation has been substantially slower than that of the national economy during the past two decades. Paradoxically, however, productivity of the State's manufacturing industries has remained higher than the national productivity level (see Broner, 1980). One tentative explanation of this result is that the State's manufacuring industries have maintained their relative productivity levels by shutting down submarginal plants, thus raising the average. It is clear that while this process enables the State's industries to hold their ground against the national productivity levels, it does so at the cost of shrinking the State's share of manufacturing activities. The process cannot be continued indefinitely.

Another possibility is that industries in New Jersey are more likely to invest in plant modernizations than in new plants. This can keep productivity up and at the same time keep investment to value-added ratios relatively low. However, this process should not be expected to continue in the long run; possibilities for modernizing existing plants are limited. Eventually productivity must suffer unless new plants are built.

Business Taxes and Investment

There are many factors influencing business investment. These are usually summed up as "business climate" and include variables that are beyond control of the government as well as those that are subject to government influence.

Among the variables subject to government actions, perhaps the most important ones are the business tax structure and regulations. In order to estimate the effects of business taxes on capital investment, a statistical model has been tested to examine why new capital expenditures differ over the 48 states.[4]

[4] Because of data inconsistency, South Dakota had to be excluded from the sample.

The estimated statistical equations using the data for 47 continental states are:

(1) $\text{CAPEXP} = \underset{(13.43)}{12.8316} - \underset{(4.476)}{0.6823}\text{TAXRATE}$

$R^2 = 0.3081 \qquad F(1,45) = 20.04$

(2) $\text{CAPEXP} = \underset{(13.36)}{12.8450} - \underset{(4.497)}{0.6937}\text{TAXRATE} - \underset{(0.676)}{0.0207}\text{WAGE}$

$R^2 = 0.3152 \qquad F(2,44) = 10.13$

where CAPEXP stands for the 1977 capital expenditure as a percentage of value-added, TAXRATE for the corporate net income tax rate (September 1976) as applicable to the highest bracket,[5] WAGE for the 1976 state wage rates in percent deviations from the national average. The figures in the parentheses are the absolute values of the t-statistics.

The above equations demonstrate that the corporate income tax rate has a statistically significant and negative effect on the rate of capital expenditures. Relative wage rates, on the other hand, do not appear to be a significant factor (see equation 2, $t = .67$) in determining the rate of capital expenditures. Experiments with standardized wage rates, wage rates adjusted for labor productivity and the share of durable goods industries in total manufacturing employment did not improve the results. However, the effect of corporate tax rate was found to be significantly negative in all variants of the model.

Our concern for the determinants of business investment originates from the fact that investment is one important key to economic growth. If the rate of investment is affected by the corporate tax rate, so is the overall economic growth rate. Previously, the role of state corporate taxes on investment expenditures has been indirectly tested by the use of a "semi-reduced form" equation (see You, 1980). That statistical test linked state's total personal income growth to employment growth and capital growth, where capital growth was presumed to be determined by the corporate tax rate, relative wage rate, and share of manufacturing in total employment. The direct test, reported here, confirms the negative effect of corporate tax rate on investment expenditures.

The negative effect of corporate tax rates on investment will also show a similar effect on employment and, consequently, on total income growth.[6] The ultimate effect on total income growth can be accounted for by the "reduced form" equation which explains income growth by those factors which affect the capital and labor input growth. The estimated reduced form equation is given by:

(3) $\text{GROWTH} = \underset{(12.73)}{9.4020} - \underset{(3.47)}{0.3222}\text{TAXRATE} - \underset{(0.26)}{0.0044}\text{WAGE} - \underset{(2.84)}{0.090}\text{MFG}$

$R^2 = 0.4316 \qquad F(3.43) = 10.88$

where GROWTH stands for the 1976-78 annual rate (in percent) of growth of state personal income (minus farm income and transfer income[7]) in real terms, and MFG for the 1976 share of the manufacturing sector in the state's total non-agricultural employment.

According to the above equation, a relative reduction by one percentage point of a state's corporate tax rate (i.e., assuming that all other states do not change their tax rates) would result in an increase in the growth of real personal income by slightly over 0.3 of a percentage point. Since farm income and transfer payments (which are excluded from the dependent variable) account for slightly more than 10% of New Jersey's total personal income, a reduction in New Jersey's corporate business tax rate by a percentage point is expected to result in an additional growth in total real personal income by slightly less than 0.3 percentage point.

[5] New Jersey's tax rate, 7.5% during the sample period, is adjusted to 9% for the reason to be explained in the next section.

[6] This is not the case if labor-saving investment replaces the old equipments. Historically, however, net investment requiring additional employment has been dominant over the labor-saving replacement investment.

[7] The reasons for excluding farm income and transfer payments are that farm income is subject to strong exogenous influences such as the weather, and grain export embargo; and transfer payments are negatively associated with state economic conditions.

Policy Implications

The results of the statistical analysis reported above suggest that the State can promote faster economic growth by improving its tax structure. Suggestions for tax reform are presented below.

1. Net-Worth Tax

We believe that *the State can phase out the net-worth tax with no losses in revenues.*

The net-worth tax rate of 2 mills per dollar for the first $100 million is equivalent to an additional 2 percentage points in the net income tax rate at the 10% rate of return on investment, and to 1.33 percentage points at the 15% rate of return. For net worth exceeding $100 million, the net-worth tax rate decreases as the size of net worth increases. On the average, therefore, the net-worth tax in New Jersey is equivalent to about 1.5% of net income. An examination of the actual tax data shows that the net-worth tax has been about 1.4% to 1.5% of the allocated net income.

A straightforward application of this figure to the previously discussed effect of the corporate income tax on economic growth leads to the conclusion that a phaseout of the net-worth tax would generate about 0.4% per year additional real personal income growth in New Jersey. Since the current system of taxing net worth discourages new investment, a phaseout of this tax is likely to be more stimulative than an equivalent reduction in the corporate income tax.

According to the estimates by the Office of Economic Policy, a percentage point increase in the State's real personal income would result in an increase in the State's tax revenues by about 0.9%, which amounts to approximately $45 million in FY 1982. Thus, *additional revenues from economic growth resulting from the phase out of the net-worth tax would be about $18 million in FY 1982.*

New Jersey tax data indicate that the net-worth tax revenue expected from the *increases in net worth* for FY 1982 is about $10 million. Phasing out the tax by exempting new investment from tax liability means a loss of $10 million in FY 1982. This is less than $18 million of additional revenues expected from faster economic growth due to the tax phase out. Even after allowing for the possible overstatement in the estimate of the growth effect, it appears that the net-worth tax can be phased out with no loss of tax revenues.

One argument in favor of keeping the net-worth tax is that it is a stable source of revenues. However, since the net-worth tax accounts for a small fraction (less than 2%) of total revenues, its stability is not very meaningful. *A phase out would promote economic growth with no loss in State revenues.*

2. Corporate Income Tax

Unlike the phase out of the net worth tax, a reduction in the corporate net income tax rate would involve a net revenue loss to the State. For example, a reduction of the corporate income tax rate by one point will result in a loss in business tax revenues of about $100 million compared to $13 million gain from faster economic growth.[8]

However, *a commitment to a phased reduction of the rate by* 0.4 points each year for five years would minimize annual revenue losses while maximizing economic stimulation. The estimated losses in revenues would be no more than $35 million in FY 1982. In the long run, revenues would grow faster compared to the current tax rate, because the lower tax rate will generate more rapid economic growth.

3. Loss Carry-over for New Business Firms

A loss carry-over provision in the corporate tax code has been frequently recommended by the State's business community and the Economic Policy Council. A major objective of the loss carry-over is to help business survive the cash flow problems created by national recessions. However, most established business firms ought to be able to cope with business cycles. On the other hand, *new* establishments often suffer initial losses, and the additional adverse effects of

[8] The estimated loss of $100 million includes additional loss resulting from prepayment adjustment.

the downturn in the national business cycle may force closing of some firms that would be profitable in the long run if they could only survive their first few years.

In order to help new business firms, a loss carry-over could be allowed for firms during the first five years of operation. If these firms never make profits, they will go bankrupt and pay no net income taxes anyway. On the other hand, if they survive because of the loss carry-over, the State would gain an addition to the tax base which would have otherwise been lost. The revenue decline from this program cannot be accurately predicted, but it is not expected to be significant.

4. Property Tax Reform

New Jersey has been heavily dependent on property taxes as a source of revenue. For example, in FY 1975, property taxes accounted for 57% of total State and local tax revenues in New Jersey compared to 36% nationwide. With the introduction of the Gross Income Tax in FY 1977 and the accompanying property tax relief, the burden of property taxes has been lowered. In FY 1977, property taxes in New Jersey accounted for 50% of total State and local taxes while the nationwide figure remain unchanged at 36%.

Table VII.3 presents county and State averages of municipal property tax rates and their

TABLE VII.3

EFFECTIVE PROPERTY TAX RATES BY COUNTY: 1976 vs. 1980

County	No. of Municipalities	Average Tax Rates (%)		Coefficient of Variation	
		1976	1980	1976	1980
Atlantic	23	3.829	2.360*	0.319	0.193
Bergen	70	2.825	2.409*	0.299	0.282
Burlington	40	3.065	2.525*	0.169	0.166
Camden	37	3.905	3.251*	0.320	0.141
Cape May	16	2.180	1.709*	0.393	0.386
Cumberland	14	3.517	2.940*	0.103	0.114
Essex	22	5.041	4.151*	0.259	0.255
Gloucester	24	2.837	2.454*	0.193	0.140
Hudson	12	4.464	4.385	0.285	0.277
Hunterdon	26	2.693	2.171*	0.247	0.228
Mercer	13	3.503	3.042*	0.235	0.279
Middlesex	25	2.873	2.368*	0.219	0.208
Monmouth	53	3.420	2.725*	0.205	0.255
Morris	39	2.999	2.168*	0.166	0.207
Ocean	33	2.335	2.169*	0.282	0.283
Passaic	16	3.054	2.633*	0.191	0.197
Salem	15	3.129	2.337*	0.305	0.286
Somerset	21	2.813	2.437*	0.197	0.209
Sussex	24	3.305	2.746*	0.162	0.194
Union	21	3.039	2.547*	0.534	0.614
Warren	23	2.733	2.237*	0.267	0.232
New Jersey	567	3.260	2.680*	0.305	0.306

Asterisks denote that 1980 values are significantly lower than the 1976 value at the 1% level. Paired-difference test was used for the averages.

SOURCE: Computed from data in *Annual Report of the Division of Taxation*, 1976 and 1980, New Jersey Dept. of the Treasury.

coefficients of variations[9] for FY 1976 and FY 1980. The Table demonstrates that average tax rates have been reduced since 1976 in all counties of the State and the size of reduction is statistically significant in all counties except Hudson County. However, the degree of inequality in the tax rates measured by the coefficient of variation has increased in some counties and decreased in others. The statewide coefficient of variation has remained virtually unchanged (0.305 in 1976 and 0.306 in 1980), indicating that the degree of inequality in the property tax rates has not been affected by the adoption of the Gross Income Tax. The reduction in the average tax rate coupled with the same coefficient of variation implies that the tax burden has been lowered, more or less proportionately, on the average. In order to reduce the inequality, municipalities with above average tax rates would have to have a more than proportionate reduction.

While one can applaud the reduction in the average property tax rate in the State, the disparities in the tax rates need to be reduced. Table VII.4 shows the top ten and bottom ten municipalities of the State in terms of the 1980 effective tax rates. The highest rate (9.37, Winfield Township) is almost twenty times as high as the lowest rate (0.49, Chester Borough). In addition, some counties have higher average rates than others. For example Hudson (4.385) and Essex (4.151) counties have average tax rates that are more than twice as high as the lowest county average (1.709, Cape May).

It is well known that high property tax rates in the urban areas together with other disamenities contribute to business decline which, in turn, usually leads to tax increases, creating a further negative effect on economic activity. The empirical evidence of the negative effect on economic growth of property tax rates has been documented in an earlier study (You, 1980). A program designed to alleviate the property tax burdens, particularly in the urban areas, remains desirable (see Chapter VI, this *Report*).

TABLE VII.4

TEN HIGHEST AND TEN LOWEST MUNICIPALITY PROPERTY TAX RATES IN 1980

Highest			Lowest		
Rank	Municipality (County)	Effective Rate (%)	Rank	Municipality (County)	Effective Rate (%)
1	Winfield Twp. (Union)	9.37	1	Chester Bor. (Morris)	0.49
2	E. Orange City (Essex)	6.70	2	Holland Twp. (Hunterdon)	0.52
3	Orange City (Essex)	6.20	3	Ridgefield Bor. (Bergen)	0.52
4	Asbury Park City (Monmouth)	6.04	4	Pahaquarry Twp. (Warren)	0.59
5	Union City (Hudson)	5.72	5	Upper Twp. (Cape May)	0.64
6	W. New York (Hudson)	5.63	6	Rockleigh Bor. (Bergen)	0.65
7	Trenton City (Mercer)	5.54	7	Teterboro Bor. (Bergen)	0.67
8	Jersey City (Hudson)	5.48	8	Walpack Twp. (Sussex)	0.70
9	Weehawken Twp. (Hudson)	5.06	9	Lower Alloways Creek Twp. (Salem)	0.84
10	Newark City (Essex)	5.01	10	Blairstown Twp. (Warren)	0.87

SOURCE: New Jersey Department of the Treasury, *Annual Report of the Division of Taxation*, 1980.

[9] The coefficient of variation is defined as the ratio of the standard deviation to the average, and measures the degree of dispersion of the distribution of the municipal tax rates relative to the average tax rate. If, for example, all tax rates are proportionately reduced, then the coefficient of variation would remain unchanged, although the converse is not necessarily true. More than proportionate reductions of rates now above the average and less than proportionate reductions of rates now below would reduce the coefficient of variation. The extreme case is when all rates are identical. Then the coefficient of variation equals zero.

5. Unemployment Compensation Law

The process of reforming the State's unemployment compensation law is an important part of the overall effort to improve the business climate in New Jersey. We support the intent of several legislative proposals made recently to tighten eligibility requirements and ultimately to bring the unemployment compensation expenditures in line with other states.

Epilogue

In this paper, trends and determinants of business capital investment are examined and some policy recommendations are discussed. It should also be clear that tax policy changes designed to increase capital formation will be less effective if well-intentioned but ill-devised regulations are imposed on business. Capital formation in the presence of such regulations may not be improved even by lowering business tax burdens.

For example, rent controls and laws restricting the options of landlords in converting the apartments into condominiums will discourage construction of new apartment buildings creating apartment shortages, rent (implicit and explicit) increases as well as unemployment (see Chapter IV, this *Report*).

Regulatory reform will be a powerful complement to tax reduction in creating a more favorable business climate in the State. This is not to suggest that regulations are not needed. However, regulations can be devised so as to meet the regulatory objectives while minimizing the adverse effects on the economy.

It is recommended that all existing regulations be reviewed and revised, if necessary. It is also recommended that the administration and the legislature request economic impact analyses befor formulating new regulations and revising existing ones. The Economic Policy Council and Office of Economic Policy have the capability and are willing to contribute to these analyses. State governments have limited scope of operation in attempting to attract new businesses. On the other hand, inefficient regulations can easily discourage new and old businesses. Avoiding such regulatory mistakes is a sound economic policy.

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