FISCAL INFLUENCES ON RESIDENTIAL CHOICE:
A STUDY OF THE NEW YORK METROPOLITAN REGION

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These papers are prepared as a basis for Seminar discussion.
They are not publications and are subject to revision.
Dealing with a two-level federal system, James Buchanan has pointed out that as a result of variations in state income and wealth levels, equal-income taxpayers in separate states inevitably receive unequal fiscal treatment, either in the form of unequal benefits for the same amount of taxes or equal benefits for unequal tax payments. This means that in two states where benefits are equal and there is a higher proportion of high-income taxpayers in one than in the other, then any individual taxpayer in the high-income state will make smaller tax payments than his equal-income counterpart in the low-income state. If taxes are equalized, benefits will be less for the taxpayer in the low-income state. It is technically impossible to reach any other result where state per capita incomes are unequal. This is said to be so under any tax system short of the limiting case of a fiscal system operating on a pure benefit principle. Prior to the appearance of Buchanan's article, equal treatment for equals had usually been interpreted to mean equal tax burdens. By introducing the benefit side, Buchanan was able to take account of "aggregate fiscal pressure" on a taxpaying unit, and gave the name "fiscal residuum" to the algebraic difference between taxes paid and benefits received from public services. Specifically, he showed that an individual would be subject to the least fiscal pressure the higher the per capita income and wealth of the state in which he resided; i.e., the higher the state's per capita income, the lower the fiscal residuum. While granting that fiscal pressure could be equalized among equals through fiscal centralization, Buchanan maintained his


2. Another limiting case would be a head tax with the proceeds distributed in any fashion. In point of fact, unequal fiscal residua result only when tax liability is related to income or wealth, which, to be sure, are the bases of virtually all tax systems.
well-known preference for decentralisation and proposed a geographically
discriminatory federal income tax as the device to equalize fiscal residua
regardless of the taxpayer's location. He emphasized that under this
arrangement, states would retain complete fiscal autonomy,
choosing whatever types of
taxes and expenditures they prefer at the levels they prefer. The task
of the federal government would be merely to equalize fiscal residua
between equals in alternative locations.

While focusing on a two-level system, Buchanan noted that the con-
clusions applied to the other levels of the federal system as well. On
the local level, where most revenue is raised through the property tax,
differences in tax capacity depend more on per capita real estate values
in a community, including the value of business and industrial estab-
ishments and less directly on the income levels of the individuals re-
siding within it. On the other hand, the need for public services is
probably inversely related to the per capita wealth of a community, with
social welfare and educational costs reaching higher per capita levels
where low-income families are concentrated. While it is true that high
income communities usually spend more per pupil on education, per capita
or per family costs are often lower because of the existence of fewer
children per family. This is a function of lower birth rates and a
larger proportion of older families in the high-wealth communities.

Suburban communities are well aware of these facts and consequently
welcome small, high-income families, clean, light industry and office
centres while discouraging the settlement of low-income, low-taxpaying
families who consume high levels of public services. These goals are
most often achieved by means of large lot zoning. In the New York Region,
the City is surrounded in all directions by a ring up to 40 miles in
circumference where virtually all undeveloped residential land is zoned
for residences on half-acre lots or larger. Even where small lot zoning
exists, the same end is achieved by permitting only type of residential
construction whose property tax yield is estimated to be greater than the
marginal expenditures associated with families who occupy the units.
Garden apartments which average far fewer school-age children per unit
than low- and middle-range single-family dwellings are considered to be
more "profitable" in this respect than single-family dwellings in the
$20,000 class, except where their rent is too "low" and thereby attract
families with higher than average numbers of children.

In Buchanan's terms, communities which operate in this fashion are
trying, not so much to minimize expenditure, but to minimize the fiscal
residua of residents. This article is essentially an attempt to measure
that fiscal residua for a family of particular type in a cross-section of
280 suburban communities in the New York City Region in 1965. 3

The purpose of the study is twofold. The first was suggested by
Charles Tiebout in his article "A Pure Theory of Local Expenditures," 4
where he hypothesized that movement to suburban communities takes place
on the basis of a family's preference for a particular collection of
expenditure benefits. Communities vary in the mix and level of benefits
they offer; the family chooses the one, ceteribus paribus, which most
closely meets its preference pattern for public goods. In taking account
of the tax side, we refine the Tiebout approach and convert it to a
fiscal residuum measure. While the level and type of expenditure may
still be the principal public finance locational criterion, fiscal residua
comparisons allow choices between communities providing similar sets of
public services, on the basis of relative cost. Maximizing a fiscal
residuum as such is then not so much the goal as maximizing it where ex-
penditure levels and patterns are comparable. Specifically, we intend to
show the extent to which fiscal residua vary and relate these to expen-
diture levels.

The second purpose is to explain the variation in the fiscal residua
among communities. While this attempt is limited in scope, we are able to
identify one variable which is a statistically significant factor in
accounting for differences among the fiscal residua.

Expenditures

Some expenditures which governments make have no value, or even
negative value, for our representative family and should thus be excluded.

3 It should be noted here that we define "fiscal residuum" in a way
opposite Buchanan's definition; i.e., as the algebraic difference between
expenditure benefits and taxes. Our taxpayers are concerned, therefore,
with maximizing their fiscal residua rather than minimizing them.

4 Journal of Political Economy, Vol. LVII, No. 4 (December 1949),
pp. 416 - 424.
from the computation of the fiscal residuum. For example, a relatively high-income family would place no value on welfare expenditures for which it is not eligible. Consequently in the computation of benefits, we include only those that are valued and perceived; i.e., those most akin to consumer’s goods. We thus exclude welfare and other redistributive expenditures as well as those which tend to be perceived as equal between communities such as fire and police protection, sewage disposal and trash collection.

Since we are dealing with two states, New York and New Jersey, and ten counties, differences in public benefits result from state and county as well as local expenditures. Thus all levels of government except the federal government are included. Taxes and expenditures of the latter are not taken into consideration, since they are roughly equal for equal income individuals, no matter where they reside in the Region.

We have chosen as our standard family, one which consists of four persons, including two school-age children, which has a family income of $12,500 per year and lives in a $25,000 home which it is assumed to own. We chose this relatively high level of income for the reason that we consider it necessary deal with a family that has a choice among alternative locations. Below this income level, families either have an extremely limited choice among suburban communities, or must of necessity

5 In New Jersey, all suburban communities in Essex, Bergen and Union Counties, exclusive of those with extreme income levels were included. In Morris, Somerset and Passaic Counties, only communities within commuting range of New York City were used in the sample. In New York State, all of Nassau County was included along with portions of Westchester, Rockland and Suffolk Counties, choice again being based on income levels and distance from New York City. But unlike New Jersey where data was available for all communities chosen, the existence of a maze of overlapping districts with taxation and expenditure powers in New York made fiscal residuum computations for some communities impossible. Even where calculations were possible, variations within a particular community were in many instances so minor, it would have distorted the statistical tests to count them as separate observations. Thus many communities or parts of them had to be dropped. As a result, data for New York State is more limited and somewhat cruder than for New Jersey, and for the most part organized on the basis of school districts rather than on the basis of more conventional political units.

In addition to the above, fiscal residuum were calculated for nine "old cities." These are Bayonne, Elizabeth, Jersey City, Newark, Passaic and Paterson in New Jersey, and Mount Vernon, Yonkers and New York City in New York.
remain apartment dwellers in the major cities of the Region.

For such a family, the most important public service is undoubtedly the quality of elementary and high school education in a community — roughly approximated by average per pupil expenditures. Since the family is assumed to have two school-age children, this figure is doubled so as to represent the total educational benefit it receives. To this educational variable, we have added per capita expenditures on higher education by local and state governments, per capita state expenditure on educational assistance and subsidies, and per capita county educational expenditures. While it may seem strange to add per capita data to per pupil data, it can be justified in terms of our orientation, i.e., how does a prospective resident measure benefits which accrue to him in a particular community? Certainly, as a proxy for quality, it would be inappropriate to measure local educational benefits on anything but a per pupil basis, since varying age compositions of communities would distort per capita comparisons. On the other hand, since age composition is not significantly different between the three states in the Region, per capita higher educational expenditure is a reasonable measure of the quality of state colleges and universities, and more particularly, of the number of available student spaces within the institutions. For other expenditure categories such as parks and libraries, we also use per capita data since no other measure is sensible. Consequently, we end not with an exact measure of perceived expenditures and revenues, but rather with a proxy dollar figure showing the value of a set of benefits as against the cost of receiving them.

The other benefits in the compilation are those made for parks and recreation; for highways in the county of residence by the state and county governments, and in the locality by the municipal government; for local libraries; and for state hospitals. Table I recapitulates included expenditures by level of government.

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6 Not to be confused with per pupil aid which is included in the local governments' expenditure. Assistance and subsidies describe such state programs as those for the handicapped and for veterans.
Table I

**PERCEIVED EXPENDITURE BENEFITS FOR FAMILY OF FOUR**

$12,500 INCOME

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Local</th>
<th>State</th>
<th>County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary and High School Education</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Higher Education</td>
<td>X</td>
<td>X</td>
<td>e</td>
</tr>
<tr>
<td>State Hospitals</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Parks and Recreation</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Highways</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Libraries</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a For capita, unless otherwise noted.
b For pupil expenditures X2.
c Assistance and subsidies.
d New York City only.
e County governments spend some funds on community colleges in New York State. These are, however, quite small.
f Includes state government forestry expenditure.
g In county of residence.

Certainly it is debatable whether some of these are, in fact, perceived expenditures. For example, residents of northern New Jersey might place more value on state parks in adjacent New York than in New Jersey. Whether the quality of state hospitals for the chronically or mentally ill is a factor taken into consideration in choice of residence is also debatable. While expenditure on state parks is a small item with little variation between states, expenditures on hospitals are much larger, with approximately a $10 per capita differential between New Jersey at the low end and New York at the high. Further, while the condition of local streets and roads may be a significant consideration to suburbanites dependent on automobile transportation, the most important roads for particular persons may be in adjacent localities,
counties or states. And to New York residents who are not owners of automobiles, expenditure on local streets may well be a matter of indifference. Certainly these issues cannot be resolved satisfactorily short of an opinion survey regarding what factors these families do, in fact, consider.  

Taxes

On the tax side, we have included all state and local income, excise and property taxes, excluding business and other taxes which may be shifted to consumers, but only after a hard-to-trace process. For New York City, Newark, Jersey City and Yonkers where the representative family was assumed to occupy rental quarters, real property taxes were assigned by applying the residential tax rate to the average value of housing for that income class. For all of the suburbs and the remainder of the "old cities," the representative family was assumed to own and occupy a dwelling with a market value of $25,000. For these families, local property tax burdens including school, village and county taxes, if any, were computed for each individual locality on a standardized basis. Federal income tax offsets were computed for the homeowners to take account of the effect of mortgage interest and property tax deductibility. Offsets were also computed to take account of the federal tax advantage that families paying New York State and New York City income and sales taxes had over those who are not subject to them. Sales and excise taxes were estimated using the Bureau of Labor Statistics Consumer Expenditure Survey and Internal Revenue Service tables as bases for tax allocation.

For non-New York City residents, two tax computations were made. The first assumed that the family head worked in the county of his residence and was thus subject solely to income and sales taxes levied by his state only, in addition to local taxes. The second computation assumed that the family head commuted to work in New York City and thus became subject to New York City income and sales taxes plus the New York State income tax if he was commuting from New Jersey. The income tax was

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7 What sketchy information we do have from a Regional Plan Association survey on housing and locational preferences indicates that good schools, parks, recreation facilities, and libraries are characteristics considered "very desirable" by a high proportion of respondents. See Regional Plan Association, Public Participation in Regional Planning, A Report of the Second Regional Plan, October 1967.

8 According to Census data, a majority of families in the $10,000-$15,000 income class reside in rental quarters in these cities. In all other municipalities, owner-occupiers predominate.
computed using Statistics of Income data to estimate deductions. With respect to the New York City sales tax, commuters were assumed to spend $500 per year, or $2 per working day on items subject to it.

The Data

Of the 280 suburban communities for which fiscal residua were calculated, 125 were in New Jersey and 155 in New York. In every case but one, the fiscal residua was positive, a result of our assumption that the standard family contained two school-age children. The spread of the residua is vast; for non-commuters they range from $253 in Victory Gardens, a small Morris County, New Jersey community, to $3,991 in Hawthorne, an unincorporated portion of Mount Pleasant Township in Westchester County, New York. For commuters to New York City, the range is from minus $37 to $3,959, the same communities occupying the extremes. The New York range for non-commuters is from $475 to $3,991; for New Jersey non-commuters, from $253 to $1,784. For commuters, the New York range is $443 to $3,959, the New Jersey extremes, minus $37 and $1,494.

Table II shows the distribution of the fiscal residua for the entire two-state area for non-commuters and commuters along with the arithmetic mean and the standard deviation for each distribution. In addition, the means for New York and New Jersey are shown separately. These appear to differ significantly at $1,101 for New York non-commuters and $654 for their New Jersey counterparts. The differences for commuters are similar.

The differences between the averages for the commuters and non-commuters in each state shows the tax cost of commutation. For New Jersey commuters who become subject to both New York City and New York State taxes, the increment amounts to $290. New York commuters incur only an additional cost of $32.9

The variation around the means as indicated by the standard deviation is rather wide. For non-commuters, two-thirds of the fiscal residua are between $490 and $1,356. For commuters, the comparable limits are $256 and $1,272.

9 The differences are greater for Yonkers, Jersey City and Newark since these commuters who are assumed to occupy rental quarters cannot take advantage of real estate tax and interest deductions on the income taxes to which they become subject by virtue of commuting. See table VII.
### Table II

**DISTRIBUTION OF FISCAL RESIDUA FOR NEW YORK AND NEW JERSEY**

<table>
<thead>
<tr>
<th>Fiscal Residuum</th>
<th>Non-Commuters</th>
<th>Commuters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>$0 - $200</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>$200 - $400</td>
<td>4</td>
<td>51</td>
</tr>
<tr>
<td>$400 - $600</td>
<td>51</td>
<td>41</td>
</tr>
<tr>
<td>$600 - $800</td>
<td>70</td>
<td>54</td>
</tr>
<tr>
<td>$800 - $1,000</td>
<td>71</td>
<td>41</td>
</tr>
<tr>
<td>$1,000 - $1,200</td>
<td>31</td>
<td>27</td>
</tr>
<tr>
<td>$1,200 - $1,400</td>
<td>20</td>
<td>17</td>
</tr>
<tr>
<td>$1,400 - $1,600</td>
<td>20</td>
<td>16</td>
</tr>
<tr>
<td>$1,600 - $1,800</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>$1,800 - $2,000</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Over $2,000</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>280</strong></td>
<td><strong>280</strong></td>
</tr>
</tbody>
</table>

\[ X^2 = 3918 \quad 438 \quad 3784 \]

\[ X_{-New York} = 1,101 \quad 534 \quad 1,069 \]

\[ X_{-New Jersey} = 534 \quad 334 \]

An examination of the data, county by county, seems to indicate a strong positive relationship between per capita income and the size of the fiscal residuum, due no doubt to the strong positive relationship between per capita income and our most important expenditure item, per pupil educational expenditure. However, to test for statistical significance is a troublesome matter since there is no income data disaggregated to the extent we require. As a proxy for income, we have been forced to use per pupil expenditures, recognizing that the dependent variable we are attempting to explain (fiscal residuum) consists in part of the independent variable itself (per pupil expenditures) and that the results are to some extent being forced. But we have considerable confidence that per pupil expenditures are an adequate proxy for per capita income. The item is doubled in our computation.
income and therefore not totally illegitimate as the independent variable.

The distribution of fiscal residua by per pupil educational expenditure for the entire sample is shown in Table III. Table IV and V show the same data for New York and New Jersey respectively. In these tables and the analysis which follows, we deal with non-commuter data since the commuter data differs from it only by a constant 11 which would not affect the statistical results.

Table III
NONCOMMUTER’S FISCAL RESIDUA FOR NEW YORK AND NEW JERSEY SUBURBAN COMMUNITIES BY PER PUPIL EDUCATIONAL EXPENDITURE

<table>
<thead>
<tr>
<th>Per Pupil Expenditure</th>
<th>Mean Fiscal Residuum</th>
<th>Number of Communities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under $499</td>
<td>$503</td>
<td>19</td>
</tr>
<tr>
<td>$ 500 - 599</td>
<td>595</td>
<td>53</td>
</tr>
<tr>
<td>600 - 699</td>
<td>769</td>
<td>27</td>
</tr>
<tr>
<td>700 - 799</td>
<td>873</td>
<td>21</td>
</tr>
<tr>
<td>800 - 899</td>
<td>812</td>
<td>32</td>
</tr>
<tr>
<td>900 - 999</td>
<td>914</td>
<td>50</td>
</tr>
<tr>
<td>1,000 -1,099</td>
<td>1,160</td>
<td>29</td>
</tr>
<tr>
<td>1,100 -1,199</td>
<td>1,309</td>
<td>15</td>
</tr>
<tr>
<td>1,200 -1,299</td>
<td>1,496</td>
<td>12</td>
</tr>
<tr>
<td>1,300 and Over</td>
<td>2,350</td>
<td>11</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$918</td>
<td>280</td>
</tr>
</tbody>
</table>

11 That is, one constant for New York communities and one for New Jersey communities.
### Table IV
NON-COMMUTER'S FISCAL RESIDUA FOR NEW YORK SUBURBAN COMMUNITIES
BY PER PUPIL EDUCATIONAL EXPENDITURES

<table>
<thead>
<tr>
<th>Per Pupil Expenditure</th>
<th>Mean Fiscal Residuum</th>
<th>Number of Communities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under $499</td>
<td>---</td>
<td>0</td>
</tr>
<tr>
<td>$500 - $599</td>
<td>---</td>
<td>0</td>
</tr>
<tr>
<td>$600 - $699</td>
<td>---</td>
<td>0</td>
</tr>
<tr>
<td>$700 - $799</td>
<td>$593</td>
<td>9</td>
</tr>
<tr>
<td>$800 - $899</td>
<td>752</td>
<td>30</td>
</tr>
<tr>
<td>$900 - $999</td>
<td>902</td>
<td>49</td>
</tr>
<tr>
<td>1,100 - 1,199</td>
<td>1,389</td>
<td>15</td>
</tr>
<tr>
<td>1,200 - 1,299</td>
<td>1,896</td>
<td>12</td>
</tr>
<tr>
<td>1,300 and Over</td>
<td>2,350</td>
<td>11</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$1,101</td>
<td>155</td>
</tr>
</tbody>
</table>

### Table V
NON-COMMUTER'S FISCAL RESIDUA FOR NEW JERSEY SUBURBAN COMMUNITIES
BY PER PUPIL EDUCATIONAL EXPENDITURES

<table>
<thead>
<tr>
<th>Per Pupil Expenditure</th>
<th>Mean Fiscal Residuum</th>
<th>Number of Communities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under $499</td>
<td>$503</td>
<td>19</td>
</tr>
<tr>
<td>$500 - $599</td>
<td>596</td>
<td>53</td>
</tr>
<tr>
<td>$600 - $699</td>
<td>749</td>
<td>37</td>
</tr>
<tr>
<td>$700 - $799</td>
<td>1,004</td>
<td>12</td>
</tr>
<tr>
<td>$800 - $899</td>
<td>1,413</td>
<td>3</td>
</tr>
<tr>
<td>$900 - $999</td>
<td>1,211</td>
<td>1</td>
</tr>
<tr>
<td>1,000 - 1,099</td>
<td>---</td>
<td>0</td>
</tr>
<tr>
<td>1,100 - 1,199</td>
<td>---</td>
<td>0</td>
</tr>
<tr>
<td>1,200 - 1,299</td>
<td>---</td>
<td>0</td>
</tr>
<tr>
<td>1,300 and Over</td>
<td>---</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$654</td>
<td>125</td>
</tr>
</tbody>
</table>
The formal hypothesis is that the amount of the fiscal residuum in a community is related to per pupil educational expenditure. If we define \( \mu_1 \) as the average fiscal residuum for those communities whose per pupil expenditure falls into the class \( \Xi \), where \( I \) is the total number of expenditure classes, then formally we are testing the hypothesis:

\[
\begin{align*}
H_0 &: K_{\Xi_1} - K_{\Xi_2} - K_{\Xi_3} = \ldots = K_{\Xi_I} \\
H_1 &: K_{\Xi_1} \neq K_{\Xi_2} \neq K_{\Xi_3} \neq \ldots = K_{\Xi_I}
\end{align*}
\]

as opposed to

\[
\begin{align*}
H_0 &: K_{\Xi_1} = \ldots = K_{\Xi_I} \\
H_1 &: K_{\Xi_1} \neq \ldots \neq K_{\Xi_I}
\end{align*}
\]

where \( H_1 \) indicates that the fiscal residuum does vary with per pupil expenditures.

This type of hypothesis can conveniently be tested by analysis of variance. The results of four separate tests are presented in Table VI.

Test A for the entire sample combined rejects the null hypothesis \( H_0 \) and supports the hypothesis \( H_1 \), i.e. the fiscal residuum \( \mu_{\Xi_1} \) does vary with school expenditures, at the one percent level. The chance of accidental observation of so large an \( F \) is less than one out of 100.

Test B was based on the hypothesis that the fiscal residuum varied by state:

\[
\begin{align*}
H_0 &: \mu_{NY} = \mu_{NJ} \\
H_1 &: \mu_{NY} \neq \mu_{NJ}
\end{align*}
\]

Table VI

RESULTS OF ANALYSES OF VARIANCE

<table>
<thead>
<tr>
<th>&quot;F&quot; Value</th>
<th>5% Level</th>
<th>1% Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test A - NY and NJ Combined by Educational Expenditure</td>
<td>7.18</td>
<td>1.92</td>
</tr>
<tr>
<td>Test B - NY vs. NJ</td>
<td>6.35</td>
<td>3.87</td>
</tr>
<tr>
<td>Test C - NY by Educational Expenditure</td>
<td>6.12</td>
<td>2.07</td>
</tr>
<tr>
<td>Test D - NJ by Educational Expenditure</td>
<td>3.24</td>
<td>2.65</td>
</tr>
</tbody>
</table>
Here the null hypothesis $H_0$ was rejected at the 5 percent level; the "F" statistic being barely shy of the one percent level.

Finally, tests were conducted for New York and New Jersey separately to determine if the fiscal residuum varied with educational expenditure within each of the states. The null hypothesis $H_0$ was rejected at the one percent level in New York (Test C) and at the 5 percent level in New Jersey (Test D). In the latter, the "F" statistic was just short of the required level of rejecting $H_0$ at the one percent level.

The Old Cities

For purposes of comparison with the suburbs, we have computed the fiscal residua for nine "old cities" of the region including New York City. These are shown in Table VII.

Comparing these figures with those in Table II, we find that the fiscal residua for the New Jersey cities are almost identical with those in the New Jersey suburbs. Slightly lower per pupil expenditure benefits and higher poverty-related costs in the City, both of which would tend to lower fiscal residua, are probably offset by lower per capita educational costs due to a smaller proportion of school-age children relative to total population.

For New York State, where we have made computations for only three cities, the results are different. The substantial differences in average fiscal residua are no doubt due to the fact that per pupil educational benefits are substantially higher in the suburbs. These differences, which are accentuated by higher poverty-linked expenditures in central cities are too great to be offset by lower per capita educational costs.

Conclusion

Aside from the desirability of implementing the widely accepted tax principle of horizontal equity or "equal treatment of equals," Buchanan pointed out that unequal fiscal pressures, i.e. fiscal residua can result in a regional allocation of resources different from that which would occur as the result of economic considerations alone. In general, resource units would be drawn from low to high-income states so as to achieve the most favorable fiscal position.

We can see the same influences at work within a region, most likely
in a much more immediate way. While fiscal considerations may be only
marginal in making location decisions between regions, once having chosen
a region on the basis of other considerations, the choice of a high-
income family or businessman between communities may be strongly influen-
ced by fiscal considerations. That community which discourages in-
migration by low-income families so as to keep its tax rate low, ceteris
paribus, is most attractive to the high-income family trying to maximize
its fiscal residuum and to the company looking for the optimal fiscal
environment.

In addition to the effect on fiscal residua and its implications
for horizontal equity in the tax structure, such occurrences have much
more pernicious effects. Only recently have we begun to notice that
Negroes, in effect "locked in" the Central City because of zoning and
construction regulations, in addition to pure discrimination, have conse-
quentially been "locked out" from factory employment which is typically
expanding in the suburbs and is stagnant in the City. In New York City,
factory jobs have been declining in number for 15 years even as total
employment in the City has risen. The unskilled who live in the City's
slums are, of course, hardest hit by this decline. When job discrimina-
tion as such is not present, the absence of efficient transportation
systems moving out of the Central City to the new industrial locations,
effectively prevents low-income city residents from taking advantage of
the new employment opportunities.

To the extent that these locational decisions have been based on
fiscal rather than economic considerations, we have resource misalloca-
tion in a pure form with particularly dire implications for the future of
the City and its residents. The misallocation is, moreover, cumulative.
Higher industrial tax burdens which result from the out-migration of
businesses further accelerate out-migration. The tax base is further
reduced and the stage is set for new increases in tax rates or for further
deterioration of public services.

Happily, the basis for adjustment of unequal fiscal pressure is
readily available on the local level. Unlike Buchanan's two-level
system which required a radically changed and possibly unconstitutional
method of apportioning income tax burdens and involved a host of
practical problems, local fiscal inequities can be eliminated through well
tested devices such as state assumption of local functions, consolidation
of local governments or of some of their functions and increased state
grants based on need. Certainly there is movement in these directions;
the recognition that unequal fiscal pressures are as large and widespread
as they are should hopefully accelerate these fiscal reforms.

Table VII

FISCAL RESIDUA IN THE "OLD CITIES"

<table>
<thead>
<tr>
<th>State and City</th>
<th>Non-Commuters</th>
<th>Commuters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New York</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mt. Vernon</td>
<td>$892</td>
<td>$860</td>
</tr>
<tr>
<td>New York City</td>
<td>836</td>
<td>312</td>
</tr>
<tr>
<td>Yonkers</td>
<td>353</td>
<td>312</td>
</tr>
<tr>
<td>Average, New York State</td>
<td>694</td>
<td>506</td>
</tr>
<tr>
<td><strong>New Jersey</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bayonne</td>
<td>901</td>
<td>611</td>
</tr>
<tr>
<td>Elizabeth</td>
<td>900</td>
<td>610</td>
</tr>
<tr>
<td>Jersey City</td>
<td>710</td>
<td>338</td>
</tr>
<tr>
<td>Newark</td>
<td>628</td>
<td>256</td>
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<tr>
<td>Passaic</td>
<td>580</td>
<td>290</td>
</tr>
<tr>
<td>Paterson</td>
<td>310</td>
<td>20</td>
</tr>
<tr>
<td>Average, New Jersey</td>
<td>671</td>
<td>347</td>
</tr>
</tbody>
</table>
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