



PROPERTY TAXES IN ILLINOIS

A. James Heins

Part I: PROPERTY TAX CHANGES IN ILLINOIS, 1940-77

Until the turn of this century, almost all of the revenue of the state as well as local governments was derived from the property tax. Since 1900, however, the state has turned increasingly to other forms of taxation. In fact, in 1943 state government made its last property tax levy, and for the last forty-five years sales and income taxes have financed the rapid expansion of state government spending.

Local government units continue to have to rely, at least in part, on this form of taxation. The purpose of this study is to analyze changes in the level and distribution of

property taxes in Illinois from 1940 to 1977. It will show the changing dependence on property taxes by the various units of local government and relate those changes to the personal income of those units as well as to other social and economic attributes.

While the property tax continues to be the major tax source available to local units of government, its relative importance is declining. Table 1 shows property tax extensions for selected years in the period 1929-77. As a percent of income, extensions in 1976 are lower than any year since 1955. It should be pointed out that the 1977 extension figure is artificially high because of action taken in Cook County anticipating replacement of the personal property tax. Much of the big increase in Cook County extensions will not be collected. When one notes that those 1977 property taxes account for about 30 percent of all state and local tax revenues (exclusive of federal aid) compared with 41 percent ten years earlier, the decreasing reliance on property taxation is made even clearer.

Table 2 reveals another perspective on property taxes in Illinois, a comparison of property tax levels in other

Table 1

PROPERTY TAX EXTENSIONS AND PERSONAL INCOME:
SELECTED YEARS 1929-77 IN ILLINOIS

Year	Property Tax Extensions* (millions)	Personal Income (billions)	Extensions as a Percent of Income
1929	\$ 350.7	\$ 7.3	4.82%
1933	333.4	3.3	10.00
1940	330.9	6.0	5.55
1945	366.7	10.8	3.38
1950	566.5	15.3	3.70
1955	790.5	21.0	3.76
1960	1,206.7	26.4	4.57
1962	1,400.3	28.9	4.85
1964	1,521.4	32.1	4.74
1966	1,688.3	38.1	4.43
1968	2,046.8	43.8	4.67
1970	2,519.3	50.1	5.03
1971	2,708.4	53.4	5.07
1972	3,034.6	57.7	5.26
1973	3,137.5	63.3	4.96
1974	3,270.4	69.4	4.71
1975	3,394.6	75.4	4.50
1976	3,572.2	81.8	4.37
1977	3,921.0	89.4	4.39

Source: U.S. Department of Commerce, and Illinois Department of Local Government Affairs (DLGA).

* Property tax extensions data are reported by DLGA as being made a year earlier. For example, extensions shown above for 1977 are published by DLGA as 1976 extensions. The money is actually collected in 1977.

Table 2

PROPERTY TAX COLLECTIONS IN SELECTED STATES
FOR SELECTED YEARS 1957-76

Year	Per Capita Property Taxes (tax as a percent of income)						
	U.S.	Calif.	Ill.	Mich.	N.Y.	Ohio	Tex.
1957	\$75 (3.8%)	\$112 (4.5%)	\$93 (3.8%)	\$84 (3.9%)	\$109 (4.3%)	\$74 (3.3%)	\$63 (3.6%)
1960	91 (4.1)	133 (4.9)	109 (4.2)	106 (4.6)	132 (4.8)	90 (3.9)	78 (4.1)
1964	107 (4.3)	161 (5.3)	126 (4.2)	124 (4.7)	150 (4.9)	112 (4.4)	89 (4.1)
1967	132 (4.3)	209 (5.8)	146 (4.0)	139 (4.2)	181 (4.9)	129 (4.1)	103 (3.9)
1970	168 (4.4)	262 (6.0)	201 (4.6)	184 (4.6)	237 (5.1)	162 (4.2)	128 (3.8)
1973	216 (4.6)	348 (6.7)	244 (4.5)	234 (4.6)	320 (5.8)	186 (3.9)	161 (3.8)
1976	266 (4.3)	415 (6.0)	284 (4.0)	324 (4.9)	415 (6.1)	224 (3.7)	213 (3.6)

Source: U.S. Bureau of the Census. Figures are estimates of per capita tax collections during the fiscal year, these are also expressed, in parentheses, as a percent of estimated per capita income during the fiscal year.

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states.¹ Table 2 shows that Illinois property taxes are below the national average and well below tax levels in California, Michigan, and New York. Actually, Illinois ranks only slightly ahead of Texas, 4.2 percent income to 3.6 percent, widely regarded as a low tax state.

Not only have there been striking changes in the total property tax burden, the distribution of those taxes among the counties of Illinois has also changed significantly. In the sections that follow, the distribution of taxes in 1940 is compared with the distribution in 1977. The emphasis here is on the relationship between income and property taxes in the counties, grouped in various ways.

DISTRIBUTION OF TAXES AND INCOMES — METROPOLITAN AND RURAL AREAS

Table 3 shows changes in the relationship between property taxes and income in various metropolitan counties and rural areas between 1940 and 1977.

Changes in Income

Per capita income in Cook County in 1940 was \$958, significantly higher than the \$636 reported in the Chicago suburban counties. Rural counties reported an even lower per capita income: \$447, or less than half that of Cook County.

Between 1940 and 1977 these rural counties experienced an annual rate of growth in personal income of 7.5 percent, increasing more than fourteen times over the period. By comparison, residents of Cook County experienced an annual income growth rate of 6.0 percent, less than an eightfold increase during the same period. From having less than half of Cook County's per capita income in 1940, the rural counties achieved an income level of almost 80 percent of that in Cook County in 1977. Undoubtedly these changes reflect the migration — in substantial measure black — from rural areas in this and other states into the city of Chicago. But, they also reflect improvements in the productive capacity of agriculture and other lines of production centered in rural areas.

Looking more closely at the progress of personal income

¹ These data are actual property tax revenues reported by the U.S. Bureau of the Census, and differ slightly from Illinois data used in Table 1, which were based on figures from the Department of Commerce. Comparison of Illinois with other states required use of census data.

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Table 3
PROPERTY TAXES AND INCOME IN METROPOLITAN AND RURAL COUNTIES, 1940-77

Counties	Per Cap Tax 1940	Per Cap Tax 1977	Per Cap Income 1940	Per Cap Income 1977	Tax as % of Income 1940	Tax as % of Income 1977
Chicago metro	\$51	\$393	\$922	\$8,269	5.54%	4.75%
Cook	53	393	958	8,268	5.55	4.76
Suburban*	35	391	636	8,271	5.45	4.73
Downstate						
Metro	33	270	646	7,083	5.11	3.82
Bloomington-Normal	35	314	548	6,746	6.31	4.66
Champaign-Urbana	35	255	561	6,368	6.28	4.01
Danville	33	249	470	6,880	7.00	3.62
Quad-cities	28	263	699	7,677	4.02	3.42
Decatur	33	249	632	7,445	5.28	3.35
Kankakee	22	251	465	6,852	4.77	3.67
Peoria	35	343	796	7,903	4.40	4.34
Quincy	27	242	480	6,881	5.71	3.52
Rockford	30	303	779	7,163	3.85	4.23
Springfield	33	271	682	7,819	4.88	3.46
St. Louis	32	210	655	6,549	4.82	3.21
Rural	28	285	447	6,227	6.18	4.36

Source: Income: University of Illinois Bureau of Economic and Business Research.

Taxes: State of Illinois Department of Local Government Affairs.

* Kane, Lake, McHenry, DuPage, Will.

in specific metropolitan areas of the state — Chicago as well as downstate — it is clear that there were particularly large increases in average income in Danville, Kankakee, and Quincy; each had increases in income of more than 1300 percent over the thirty-seven year period. The slowest rates of income growth were registered by the six-county Chicago metropolitan area and Rockford.

Changes in the Distribution of Taxes

Turning now to changes in property tax extensions as shown in Table 3, the overall picture is one of relative tax decline in all areas of the state. These figures reflect the changes in the aggregate importance of the property tax reported at the outset of this paper. Specifically, property tax extensions in Cook County declined from 5.55 percent of income in 1940 to 4.76 percent of income by 1977, a reduction of almost 15 percent. In other words, while per capita taxes increased from \$53 to \$393 over the period, that increase was less than the increase in income.

At this point it is important to note that the rate at which tax extensions are actually collected in Cook County is less than that of other counties. In 1977, the latest year for which data are available (reported as 1976 extensions by the Department of Local Government Affairs), only 86.4 percent of extensions were collected, compared with the 90 to 99 percent collection rate reported in most of the other counties. This means that the \$393 per capita extension figure for Cook County reflects actual collections of approximately \$340, while collections in the other counties are close to the extension figures. Extension details are used in this analysis because of the greater detail in available data.

The tax level in Chicago suburban counties increased much faster than that in Cook. From \$35 per capita in 1940, the property tax load in these counties increased to \$391 per capita in 1977, better than 98 percent of which was collected. That represents an increase of more than elevenfold in property taxes; but since per capita income increased more than 13 times, the rate of property taxation out of income actually declined in the suburban counties.

Note the experience in other counties. Per capita property taxes in rural counties increased almost tenfold in the 1940-1977 period. But since income levels increased almost 15 times, the rate of property taxation out of income has declined substantially, from 6.18 percent in 1940 to 4.36 percent in 1977. Experience in the downstate metropolitan counties is similar but not quite as marked. From 5.11 percent in 1940, property tax extensions declined to 3.82 percent of income in these metropolitan counties in 1977. As of 1977, the level and rate of property taxation in downstate counties has been significantly less than that in the six-county Chicago area.

THE DISTRIBUTION OF TAXES AND INCOMES — COUNTIES BY INCOME GROUPS

Perhaps the most significant features of property tax changes in Illinois over the period 1940-77 are revealed in Table 4, which shows the change in the distribution of property tax burden in counties grouped on the basis of their income. In 1940 the poorer counties paid a larger share of their income to property taxes than did the wealthier counties. In 1977 the opposite was true: the wealthier counties faced the highest rate of property taxation.

Before looking further at changes in the distribution of property taxes, it is instructive to note changes in the distribution of income among the counties by decile groups.

The Narrowing of Income Differentials

Table 4 reveals that there was a substantial narrowing of the income differential between 1940 and 1977. In 1940,

Table 4

PROPERTY TAXES AND INCOME IN DECILES OF ILLINOIS COUNTIES, 1940 AND 1977

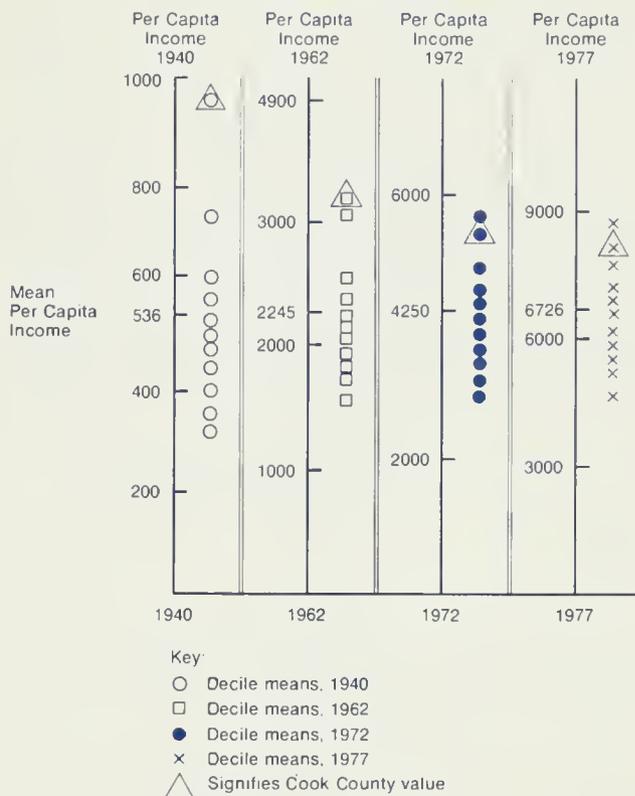
Deciles*	Per Cap Tax 1940	Per Cap Tax 1977	Per Cap Income 1940	Per Cap Income 1977	Tax as % of Income 1940	Tax as % of Income 1977
1	\$35	\$384	\$729	\$8,543	4.76%	4.49%
Cook	53	393	958	8,268	5.55	4.76
2	33	325	554	7,519	5.93	4.32
3	33	318	599	7,171	5.46	4.43
4	29	288	523	6,918	5.60	4.16
5	32	292	489	6,735	6.50	4.34
6	27	246	446	6,371	5.97	3.87
7	29	208	507	6,096	5.70	3.41
8	22	235	400	5,862	5.42	4.01
9	24	231	361	5,586	6.70	4.14
10	21	214	328	4,916	6.49	4.36

Source: Income, U.S. Bureau of the Census.

Taxes: Illinois Department of Local Government Affairs

* Grouped by 1977 per capita income. Decile 1 contains the ten wealthiest counties (save Cook), Decile 2 the next ten counties by wealth, and so on.

Figure 1:
INCOME DIFFERENTIAL AMONG COUNTIES



the per capita income in Cook County was \$958, some 192 percent higher than the per capita income of \$328 in the ten poorest counties. (Since the counties are grouped into deciles on the basis of 1977 income, it is clear that the differential would have been even wider were counties grouped by 1940 income.) By 1977 per capita income in Cook County had fallen below the average of the ten wealthiest counties, and the \$8,543 income per capita registered in the ten wealthiest counties exceeded the \$4,916 income in the ten poorest counties by only 73 percent.

The overall narrowing of income differential between the counties is revealed in Figure 1. Data for 1962 and 1972 are included to show that the narrowing process has been a continuous one. This figure is constructed so that decile per capita incomes for each of the four years are graphed around the average income for those years. By this process the reduction in dispersion of incomes among the counties becomes visually apparent. Naturally, the change between 1972 and 1977, only a five-year period, is less marked. Note also how Cook County is gradually climbing down the income ladder.

The reason for the narrowing of income differential is clear. It is a phenomenon observed in every state in the United States, and even among the states. In a society made mobile by efficient transportation and aware by radio and television, people from poorer areas have migrated to areas where wages are higher. In addition, capital has tended to flow to those areas where wages are lower. The inevitable result of both forces has been to reduce the income differential between the richer and poorer areas of the state and the country.

Changes in the Distribution of Property Taxes

Table 4 also shows changes in the distribution of total property taxes among the counties grouped by deciles of income. Note that the counties paying the highest portion of their income to property taxes in 1940 were deciles five, nine, and ten, comparatively the poor counties. In 1977, the counties facing the highest rates of property taxation were the first and third deciles and Cook County, the wealthiest counties. This simple comparison points up the dominant change in the distribution of property taxes in Illinois. Property taxes are declining faster, relative to income, in the poorer counties of Illinois.

This relationship is shown more precisely in Figure 2. The figure graphs the decile by decile relationship between per capita income and the property tax-income ratio for the years 1940 and 1977. In 1940, the trend line

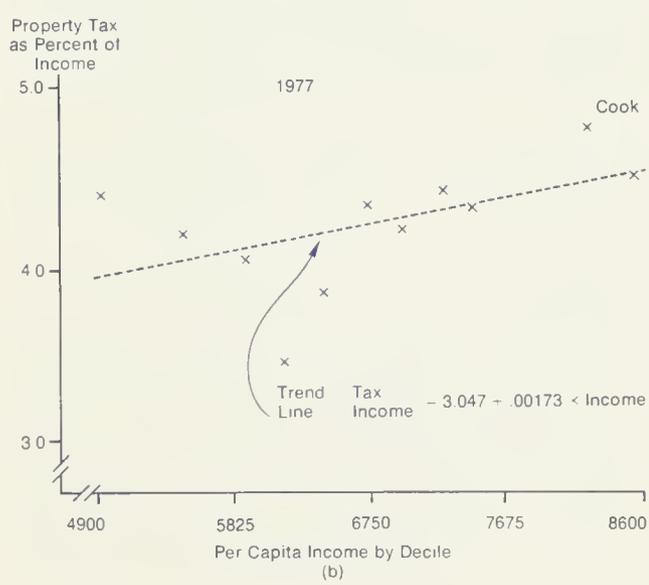
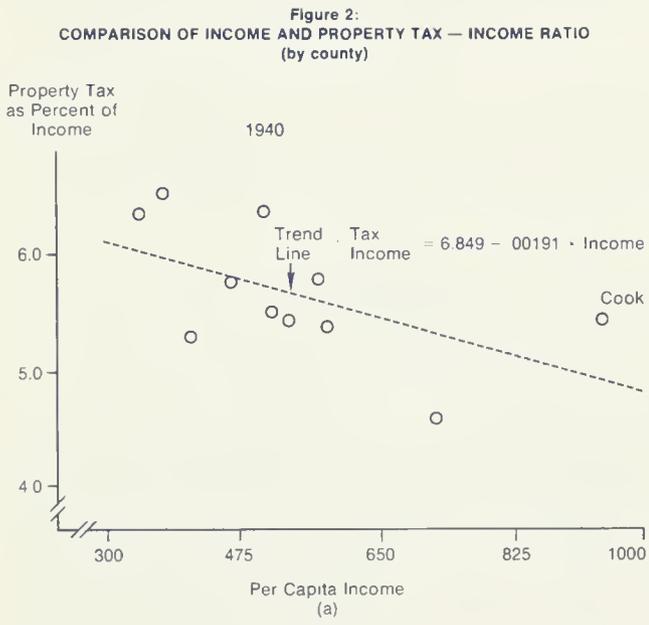
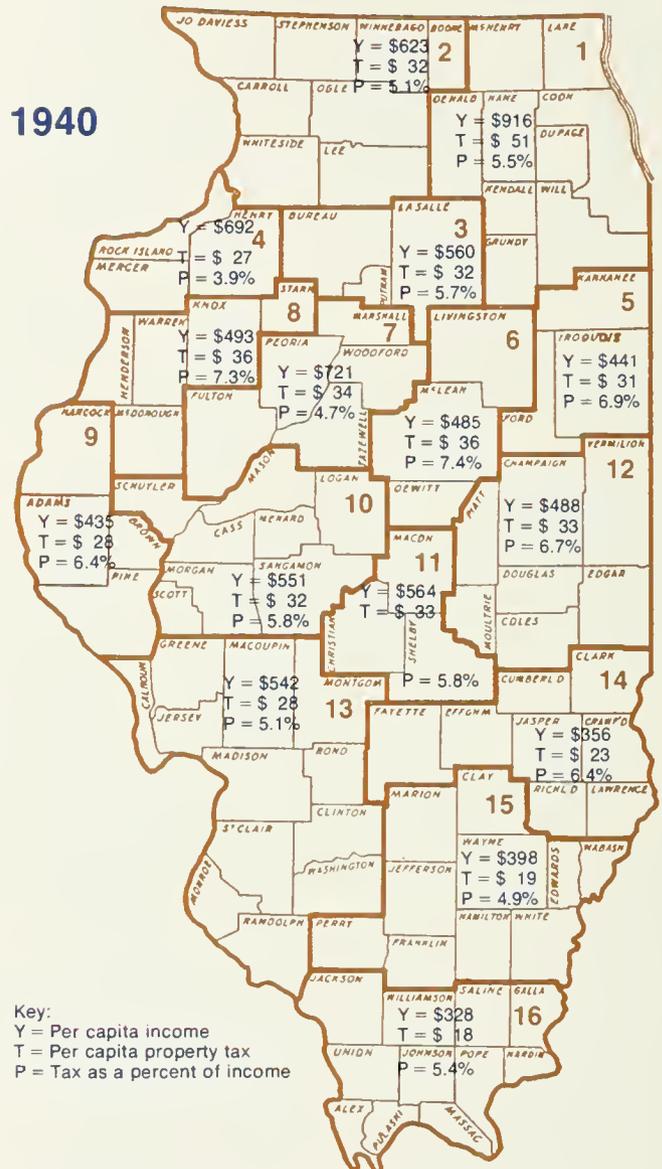


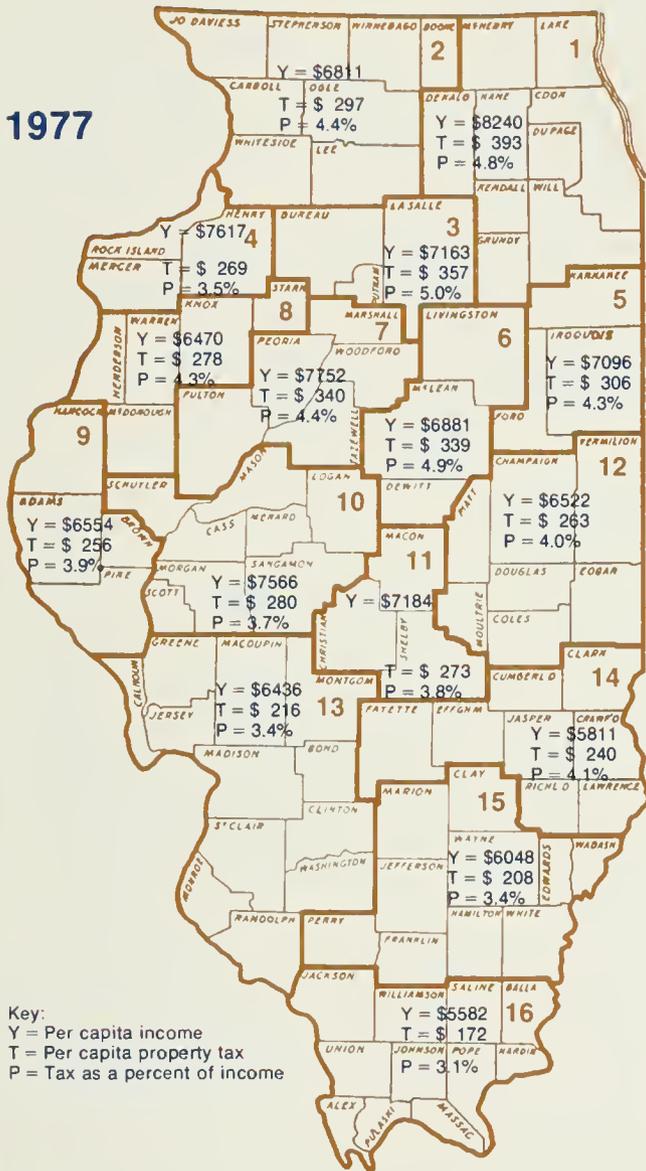
Figure 3:
DISTRIBUTION OF TAXES AND INCOME BY REGION



is clearly downward: the higher the income of a group of counties, the lower the percent of that income paid in property taxes. The trend line for 1977 is just as clearly upward: the counties with the higher incomes paid relatively higher property taxes. (The correlation coefficients for 1940 and 1977 were -0.60 and 0.54 , respectively. Figure 2 also shows equations for the trend lines.)

The character of the trend lines for the two years is somewhat different, however. The 1940 line is smoothly downward. The 1977 line appears to be composed of two segments. Over the range of incomes for the deciles with the lowest incomes, the relationship is downward; higher income means a lower relative tax burden. For the richest six deciles plus Cook County, the line slopes markedly upward; higher income means a greater tax burden. The significance of this result is explored in my

Figure 4:
DISTRIBUTION OF TAXES AND INCOME BY REGION



larger study *Property Taxes in Illinois*.² Essentially, it means that middle income counties tend to pay lower property taxes relative to income than either the poorer or wealthier counties.

THE DISTRIBUTION OF TAXES AND INCOME — REGIONS

A third way of looking at the issue of the distribution of taxes and income is depicted by the two maps in Figures 3 and 4. The maps show a regional picture of tax and income changes between 1940 and 1977. The changes

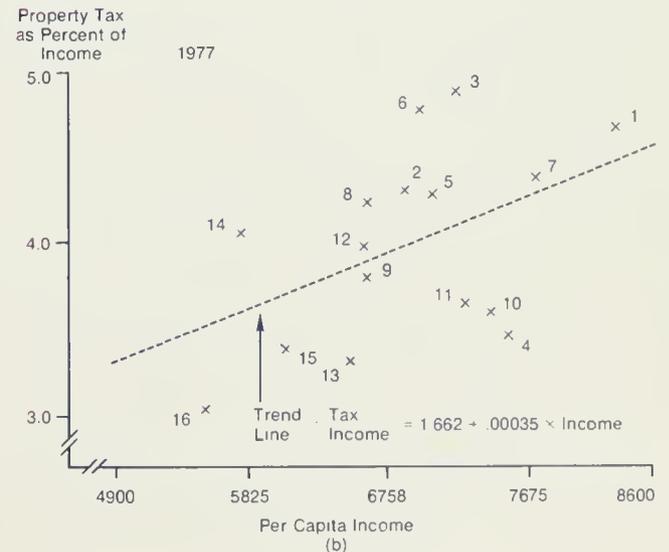
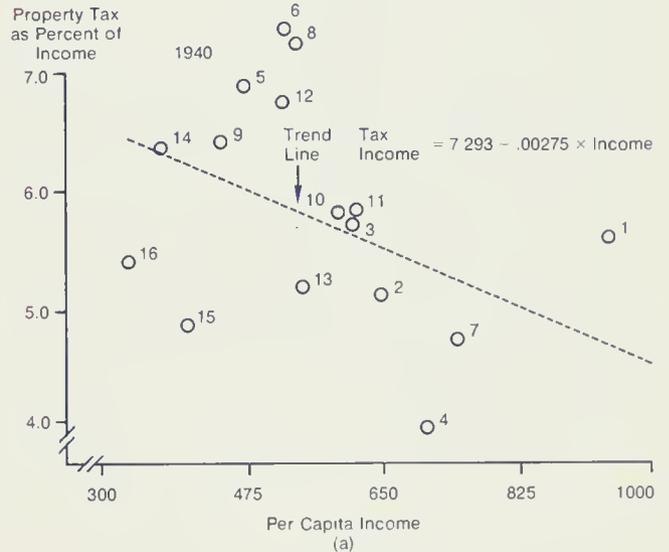
² This publication is available free in mimeographed form from the Institute of Government and Public Affairs, University of Illinois, 1201 W Nevada Street, Urbana, Illinois 61801.

revealed are similar to the changes for income deciles and metropolitan-rural areas reported above. In all regions income increased more rapidly than taxes, and relative property tax burden declined. Moreover, the decline in relative tax burden was greatest in the poorer regions of Illinois.

Regional Distribution of Income

Per capita income figures among the regions of Illinois, as shown on the two maps, underwent a striking change after 1940. In 1940 the poorest region, Carbondale, had a per capita income of only 36 percent of that in Chicago, the richest region. Although Carbondale was still the poorest region in 1977, its per capita income had increased to \$5,582 or almost 68 percent of the \$8,240 registered in Chicago. Differentials in the regional distribution of income have also clearly narrowed.

Figure 5:
COMPARISON OF INCOME AND PROPERTY TAX — INCOME RATIO (by region)



The reasons for declining regional income differentials in Illinois are the same as those discussed earlier. Migration of people from poor to wealthy regions, and migration of capital from wealthy to poor regions both contribute to the economic uplifting of the poor regions and the narrowing of income differentials.

Property Taxes in the Regions

The changing pattern of property tax distribution among the regions is similar to that displayed earlier for counties arrayed by income groups and metropolitan areas. The poorer regions have experienced greater income increases than the wealthier regions, but property taxes have not kept pace. And, in all regions, property taxes have increased at a slower pace than income.

These facts are also made apparent by the maps. In the Chicago region taxes as a percent of income declined from 5.5 percent in 1940 to 4.8 percent of income in 1977. In Carbondale, taxes as a percent of income declined from 5.4 to 3.1 percent in the same period. If relative tax burden declined in Chicago, it declined even further in Carbondale.

The pattern of tax change among the regions between 1940 and 1977 shows up clearly in Figure 5. The display is similar to that of Figure 2. Data for each of the sixteen regions are charted on graphs that relate per capita income to the percent of that income paid in property taxes for 1940 and 1977. Values for each of the regions are denoted by the number of the region.

The trend lines in Figure 5 reveal the familiar "twist" in the property tax-income relationship. The 1940 trend line slopes downward, reflecting the tendency for the poorer regions to have faced a greater burden of property taxes. The 1977 trend line slopes upward showing that wealthier regions of Illinois are now paying a higher percent of their income to property taxes.

SUMMARY AND IMPLICATIONS

The foregoing sections of this paper reveal two important aspects of property tax change in Illinois over the period 1940 to 1977. One, property tax burden as a percent of income has declined in all regions of the state and among all categories of counties. This decline was not continuous. From a low point after World War II, property tax burdens increased until a high point in 1972 after which a marked decline occurred.

The second important change has been a redistribution of burden between richer and poorer regions. Property taxes as a percent of income tended to be higher in poorest counties in 1940. The reverse tended to be true in 1977; taxes were relatively higher in the richest counties.

The relative decline in property taxes everywhere can be explained by two basic factors. There has been a modest decline in demand for public services because of demographic change, principally the reduction in the school-age population; and there has been a shift in emphasis to other forms of taxation. Local government has increased its reliance on utility taxes, sales taxes, and other minor revenue sources.

The twist in the tax-income relationship between 1940 and 1977 can probably be attributed to redistributive aid to the common schools. Use of the Strayer-Haig formula for state aid to education prior to 1973, and the resource equalizer formula employed since, have effectively increased the share of the education tab picked up by Springfield. Since almost two-thirds of property taxes go to elementary and secondary education, this inevitably gave more property tax relief to the poorer regions of the state. Since that was clearly an intended result of employing a redistributive aid formula, the findings of the study clearly imply that the formula was effective.

Part II: THE DISTRIBUTION OF PROPERTY TAXES IN ILLINOIS IN 1977

During the last several years, and especially since California's Proposition 13, the property tax has been a hot topic in our national press. Illinois is no exception. The purpose of this paper is to describe and evaluate the distribution of property taxes in Illinois in order that this issue may be pursued more rationally in the months and years ahead. The unit of analysis will be the Illinois county, and the year under consideration is 1977.

Do agricultural counties tend to pay higher property taxes than nonagricultural counties? What effect has urbanization had on property tax burden? Is the burden of property taxes higher in those counties with many school-age children? What is the effect of manufacturing on the distribution of property taxes? Do bedroom counties pay higher or lower taxes than counties where people tend to work? How does financial aid from the state and federal governments affect property taxes? Perhaps most importantly, what is the relationship between income and tax burden?

THE METHOD OF ANALYSIS

The general procedures employed were those of modern econometric analysis. It assumes that the level of property taxes in any county depends on a number of economic and demographic factors. The concept of the level of taxes was expressed in two ways: (1) property taxes extended per capita and (2) property taxes extended as a percent of county personal income. Each of the two levels of property taxes was then related to a number of economic and demographic factors to see what effect variation in those factors would have on the burden of property taxation in the year 1977.

It should be pointed out that the purpose of these procedures is to obey the principles of *ceteris paribus*, to make "other things equal." This enables us to isolate the effect on property taxes of each of the factors, even though those factors fluctuate together in the real world.

The factors employed in the analysis were:³

Per Capita Income

We know that higher income leads to higher property taxes; as the income of citizens increases they spend part of that increased income on public goods. But there are other questions about this relationship. What effect does higher income have on the percentage of income paid in property taxes? Do people in richer counties tend to pay a smaller percent of that income to property taxes? Or, is the converse true?

Agriculture

The precise factor used is the percentage of personal income arising in the agricultural sector. Some have suggested that the burden of property taxes is higher in heavily agricultural counties.

Manufacturing

Here the factor of concern is the percentage of personal income arising from manufacturing. At first blush, one might suppose that more manufacturing activity would imply less agriculture, and thus would be redundant. But, that is not so. The percentage of income from agriculture in the average county in 1977 was 14.5 percent, from manufacturing 22.1 percent. That leaves some 63.4 percent of income to arise in the other sectors. Moreover, agriculture and manufacturing are different than other sectors of the economy; their products are largely for export. Products of other sectors — retail trade, utilities, finance — are largely for consumption in Illinois. Thus, both agriculture and manufacturing merit separate inclusion.

Urbanization

This factor is measured by the percentage of the population living in areas defined by the U.S. Bureau of the Census as urban. Urbanization is related to manufacturing and agriculture by the nature of the production processes involved. Agriculture requires open space, manufacturing requires concentrations of people. Beyond that there is much room for variation. The United States county with the highest value of agricultural output is Los Angeles, also a highly urban county. Conversely, in some counties that are rural agriculture does not dominate.

Age Distribution

This variable is measured by the percentage of the population between five and twenty years of age. Public services — education, health, and even police — are consumed principally by the young. Since the lion's share of property taxes goes to these services, one might assume that counties with a higher percentage of young people would pay a higher percent of their income to property taxes.

Commuting

Here the question raised is: what is the relationship between taxes in bedroom counties and taxes in counties with high employment? The community factor is measured by the net percentage of the county population working in another county. This variable ranges from negative values in counties with a high influx of workers to highly positive values in bedroom counties. One might suppose that bedroom counties have fewer production facilities offering property tax support relative to income defined by place of residence. On the other hand, fewer public services may be needed in those counties.

Federal and State Aid

Counties receive varying amounts of aid from the federal and state governments. What effect does this aid have on property taxes?

Aid might be used to finance more public services; economists call this the stimulative effect of grants-in-aid. Aid might also serve to reduce local taxes; this is the so-called substitutive effect of aid. This analysis may provide some insight into this relationship among the 102 Illinois counties in the year 1977.

³ Details of the technical analysis employed here are shown in the Technical Note to Part 3 of my larger study, *Property Taxes in Illinois*

SOME FINDINGS

The results of the analysis generally show that: (1) counties with higher incomes pay higher property taxes, although the relationship is not uniform; (2) other things equal, property taxes are higher in agricultural counties; (3) property taxes are also higher in manufacturing counties; (4) young people require higher property tax support; (5) bedroom counties tend to pay lower taxes than the counties to which people commute to work; (6) urban concentration facilities lower levels of property taxes; and (7) state and federal aid is both stimulative and substitutive, i.e. of each dollar in aid, 64 cents are spent for services or other tax relief and 36 cents are returned to property tax payers.

Let us hold the discussion of income and tax burden to last and take the remaining relationships in turn.

Agriculture

The technical analysis indicates a strong and positive relationship between agriculture and the burden of property taxes. The burden of property taxes — both per capita and as a percent of income — is higher in counties that depend more heavily on agriculture.

Part (a) of Graph 1 shows the relationship between per capita property taxes and the percentage of personal income earned in the agricultural sector. At the mean value for all Illinois counties — 14.5 percent of income from agriculture — per capita property taxes were \$273 in 1977. However, in counties that relied more heavily on agriculture, say 30 percent, per capita property taxes averaged \$301. This represents a tax burden 10 percent higher than the average. At the other end of the spectrum, counties that had no agricultural output paid an average of only \$247 in property taxes. Again, it should be remembered that this analysis presumes that other factors — income, urbanization, etc. — are being held constant.

Part (b) of Graph 1 shows the effect of agriculture on property tax burden as measured by the percent of income paid to property taxes. The results are similar; at the mean 14.5 percent agriculture level, 4.32 percent of income went to property taxes. At 30 percent agriculture, the tax percentage increased to 4.73 percent.

At this point, it is important to note that the implications of these findings are unclear. Some may use the results to emphasize that the agricultural community is "overtaxed." However, since that community has a role in the political process, one could suggest that the results indicate that agricultural areas tend to demand more public services financed from property taxes. These services include far-flung rural roads and a long-haul educational system. A further analysis of the implications is left to others.

Manufacturing

The study also shows a positive relationship between property taxes and the importance of manufacturing, although the statistical relationship is not quite as strong. (For those interested in statistical details, I again refer the reader to my larger study *Property Taxes in Illinois*.²)

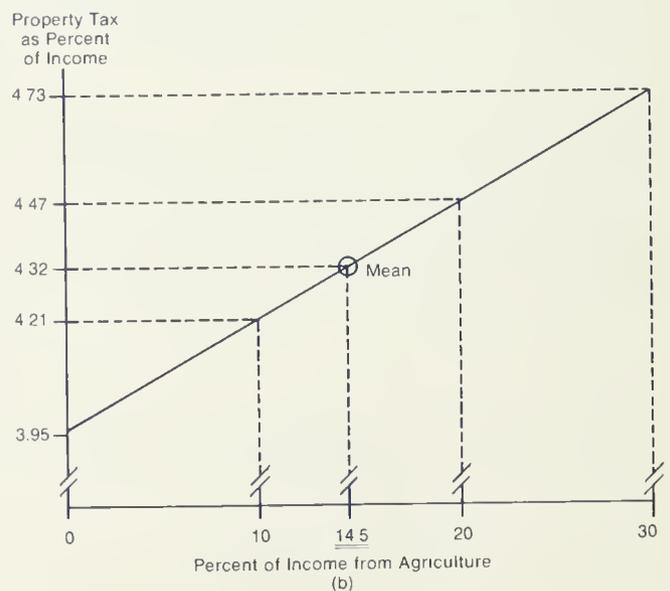
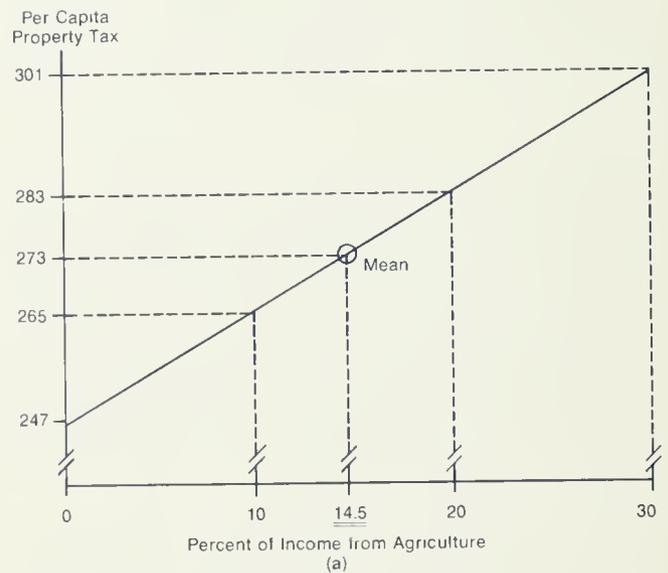
A graph of this relationship, similar to that drawn for the agricultural factor, would show that at the mean level of reliance on manufacturing — 22.1 percent of income — per capita property taxes again average \$273. If reliance

on manufacturing were to be 60 percent of income, property taxes could be expected to average \$302, an increase of more than 10 percent from the mean. At zero percent manufacturing, property taxes would average \$256 per capita.

The effect of manufacturing on the percentage of income paid in property taxes is very similar; manufacturing counties pay higher property taxes out of income than nonmanufacturing counties. In counties where manufacturing generates 60 percent of personal income, property taxes average 4.7 percent of income. In counties with zero percent of income from manufacturing, property taxes come to 4.1 percent of income.

Note that increases in both agricultural and manufacturing activity increase property tax burdens. At first

Graph 1:
AGRICULTURE AND PROPERTY TAXES



glance this might seem paradoxical. However, as indicated earlier, these sectors are both export oriented, and part of that property tax may be exported. If so, there would be a tendency to have higher levels of property tax in export counties. Note most particularly that property taxes on agriculture are akin to severance taxes. Viewed in this light the results reported for agriculture and manufacturing are consistent.

Age Distribution

The results for this factor are especially significant. If nothing else, the conformity with logic suggests some reasonableness to the procedures used here. The findings are simple and clear: counties with a high proportion of school-age children tend to pay higher property taxes.

Graph 2 shows the effect of having a high proportion of people ages 5-20 on property taxes per capita — Part (a) — and on the percent of income devoted to property taxes — Part (b). In counties with 25 percent of the population aged 5-20, the property tax burden averaged \$251 per capita in 1977. If the percent of people 5-20 were 35 percent, the per capita property tax burden would average \$315. This represents a substantial difference. Part (b) of the graph shows that the amount of income going to property taxes increased from 3.88 to 5.16 percent over the same increase from 25 to 35 percent in school-aged children.

What are the implications of these findings? It probably means that if people in a county have a high birth rate and create a large young population, they will pay for that condition with higher property taxes. This is hardly a surprising conclusion. Nor would it appear to be an undesirable situation, though there are those who would argue with it.

Commuting

A county that experiences in-commuting tends to have a higher property tax burden out of income; bedroom counties reported lower property tax levels. Property tax levels range from \$298 per capita in counties with a 20 percent influx of workers to \$228 in counties with an 80 percent outflow of workers. The percent of income going to taxes ranges from 4.73 to 3.60 over the same range of commuting expense.

The implications of these findings are certainly not clear. It must be noted that the tax data employed are gross data. Property taxes include residential taxes as well as taxes on business property. There is no way of telling if the tax on the typical person's home is higher or lower in the bedroom community. In any case, for those who believe that attracting industry will lower property tax burdens, these results — at a minimum — raise a question.

Urbanization

The results for the urbanization factor are significant. Urbanization lowers property tax burdens. Compared with the \$273 per capita property tax burden at the average urbanization value of 43.1 percent, property taxes range from \$309 in the typical 100 percent rural county to \$239 in the 100 percent urban county. As a percent of income, property taxes range from 4.93 percent of income to 3.51 percent of income.

Two reasons for this relationship emerge as most likely. For one, urban counties rely more heavily on other revenue sources — utility taxes, parking revenues, sales taxes — than rural communities. The other is that public services relying most heavily on the property tax, roads and schools in particular, are most subject to the economies of urbanization. Whatever the reasons, people in urbanized areas tended to pay less property tax in 1977 than their rural brethren.

Federal and State Aid

The effect of aid to local units of government on property tax levels is clearcut and consistent with economic notions about the behavior of governments. Increased aid to local governments has resulted, in part, in increased services in the typical Illinois county — the stimulative

Graph 2:
AGE DISTRIBUTION AND PROPERTY TAXES

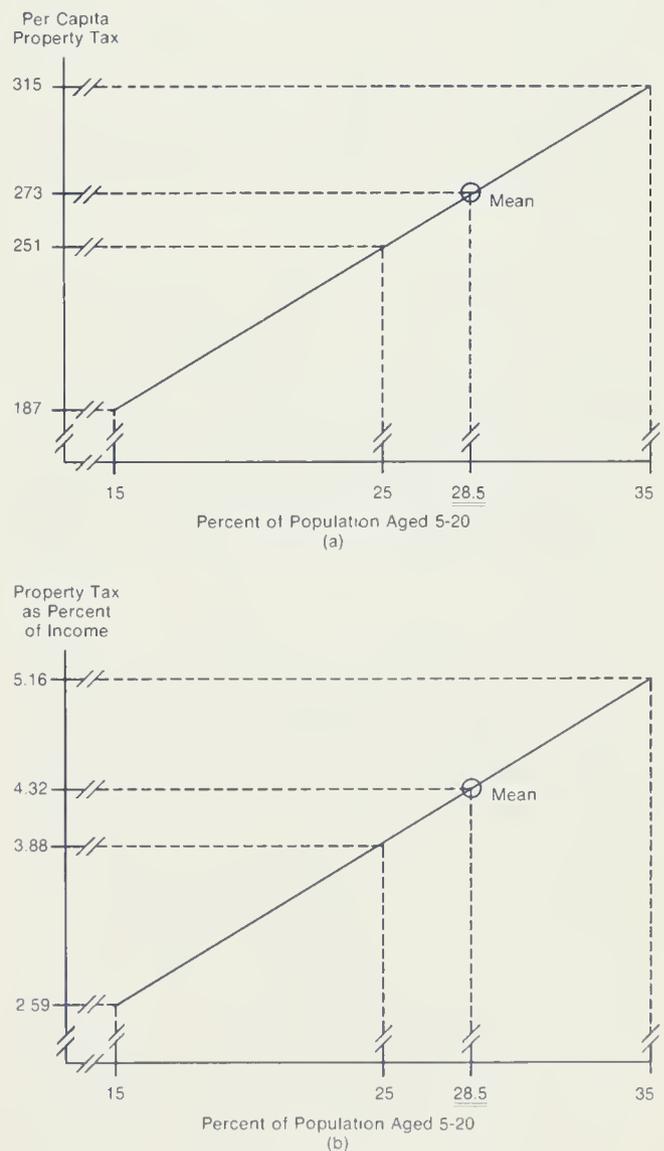


Table 5
PROPERTY TAXES AND INCOME IN 1977

County Per Capita Income	Estimated Per Capita Property Tax	Property Tax as % of Income
\$5,000	\$233	4.67%
6,000	254	4.24
6,485	272	4.20*
6,510	273	4.20**
7,000	297	4.24
8,000	360	4.50
9,000	445	4.94

* Minimum tax as a percent of income occurs at income of \$6,485
 ** Tax percentage at the mean county per capita income of \$6,510

effect — and in part in property tax reduction — the substitutive effect.

The results of this analysis suggest that 36 cents of each dollar in aid went to property tax relief in 1977 and 64 cents to something else. That something else might have been other tax relief or increased services. To the extent that increased services result, the aid would be termed stimulative. It should be noted that these findings reflect changes in gross aid. They do not offer interesting conclusions about the impact of specific aid programs that may be of the block or matching variety.

Per Capita Income

Last, but not least, are the results of the analysis showing the relationship between income and property tax burdens in Illinois counties in 1977. In this case property tax burdens are (relatively speaking) the highest in the poorest and the richest counties. The property tax burden is relatively small in counties with average incomes. These findings are reported in Table 5.

Because the relationship between income and taxes was obviously different, special techniques had to be employed to sort it out. The techniques are those of "non-linear analysis." Note that the relationships displayed in Graph 3 are not straight lines as they were in the earlier graphs.

The tax-income relationship shows up in Part (a) of Graph 3 as follows: As county per capita income increases in the low range (from \$4,000 to \$6,000), per capita taxes increase only slightly (\$233 to \$254). In the upper ranges of income, however, the opposite is true. As income increases about 12 percent (from \$8,000 to \$9,000), the per capita taxes increase a whopping 24 percent (from \$360 to \$445).

Part (b) of the graph shows these relationships directly in percentage terms. Note that as income increases in the lower range, the percentage of that income going to property taxes declines. Beyond the average per capita income of \$6,510 in 1977, however, the percent of that income going to taxes increases.

Here too the significance of the results is not clear. To some they may suggest propositions involving the unfairness of it all. Others may look to the effect of income on the demand for services. Still others will look more closely at details of the total tax structure. The only certain conclusion is that, other things equal, it is cheaper in

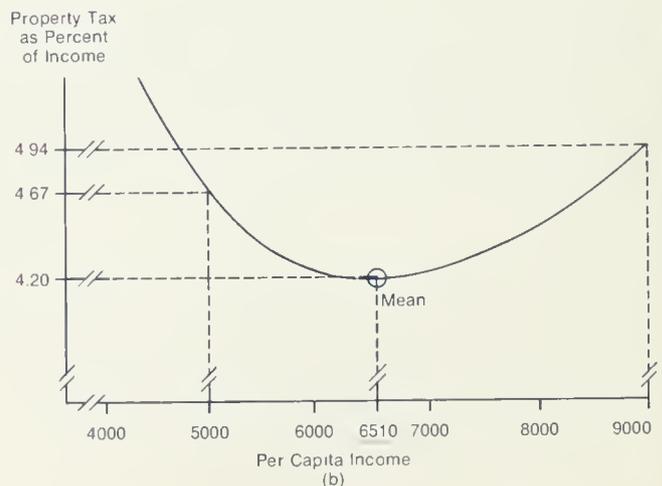
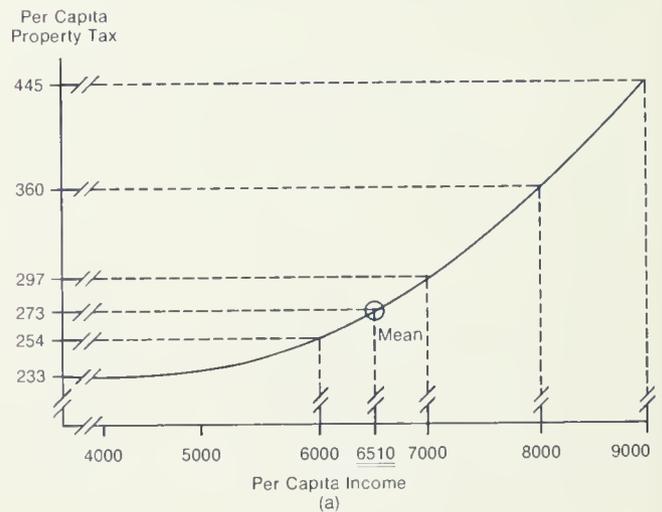
terms of property taxes to take one's income and live in a county with per capita income in the neighborhood of \$6,500.

SUMMARY IMPLICATIONS

The purpose of this study has been largely descriptive. It attempts to show how various social and economic attributes — income, urbanization, etc. — affected the level of property taxation in Illinois counties in 1977. The principal conclusions were that counties relying on agriculture and manufacturing, and counties with high school age population tended to pay higher than average property taxes. People living in urbanized counties or bedroom counties, other things equal, tended to have a below average burden of property taxes. Predictably, state and federal aid tend to reduce property taxes. Finally, people in wealthy and poor counties faced property tax burdens relatively greater than people living in middle income counties.

The implication of these findings for future develop-

Graph 3:
PER CAPITA INCOME AND PROPERTY TAXES IN 1977



ments in property taxation are not clear at this point. The current governor and legislature will actively consider legislation designed to limit the growth of property taxes in Illinois. Other legislation designed to change the distribution of property taxes will undoubtedly surface. It is unclear how the findings of this study may influence those considerations.

Undoubtedly, people favoring a property tax break

for agriculture will be led to cite these findings as evidence that their burden is constantly too high and in need of a break. Manufacturers may be led to suggest that this study supports their contention that the tax climate is not favorable to the attraction of business to Illinois. Beyond that, one can only hope that the findings will afford more reasonable decisions about property taxes in the years ahead.

NOTICE TO OUR READERS:

From time to time it is useful for editors of newsletters such as this *Illinois Government Research* to hear from their readers. They need to hear whether or not their publication is serving a useful purpose for the individual reader and whether there are comments out there that they ought to be hearing.

We are, therefore, using this opportunity to ask if a recent issue has dealt with a topic in a way that you found particularly interesting, troublesome, or enlightening. We do not contemplate starting a "Letters to the Editor" column, but an occasional statement could perhaps be published



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