

relations between states and municipalities. The field of intergovernmental relations offers a vast and challenging new territory for highway research. There is no greater opportunity, I am convinced, for rewarding and exciting work.

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### TRENDS IN FINANCING COUNTY AND LOCAL RURAL ROADS

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#### SYNOPSIS

The current widespread interest in long-range highway planning has drawn attention to the financing of secondary and local rural roads. The Public Roads Administration recently began an investigation of the characteristics of the trends in the financing of these highways during the past 25 years. This paper presents some of the preliminary findings of the study.

The project plan calls for investigations along two lines: Compilation and analysis of available statistics about the amounts of income of various types used in individual States to finance secondary and local rural roads during the past 25 years; and an intensive study of the characteristics, limitations, etc., of specific local revenue sources. Insufficiencies in the statistical data available have limited the investigation to the period from 1923 through 1945, for which usable information was at hand for 27 States. These are well distributed geographically and are otherwise reasonably representative.

Federal work-relief expenditures on secondary and local rural roads had to be excluded from the study because of the lack of State-by-State data for the earlier years in which the relief programs were in effect. Otherwise, the statistical investigation covers all current receipts raised for secondary or local rural road purposes by any unit of government insofar as these could be determined. Borrowings were excluded from the study because of the duplicating effect in a long-term study of including both the funds borrowed and the funds raised to pay off the debt.

For purposes of analyzing the observed trends in the support of secondary and local rural roads from direct revenue sources of the counties and local units, the 27 States were grouped according to the percentage of total current income obtained from these sources in 1945. It was found that in only 2 States did these roads receive more than 80 percent of their support from these sources; 7 were found to be in the 61 to 80 percent group; 7 were found in the 41 to 60 percent group; 9 in the 21 to 40 percent group; and 2 with 20 percent or less. All secondary or local rural roads were under the jurisdiction of counties or local governments in 1923.

The preliminary analysis raised important technical questions which center about the following major factors: (1) The magnitude and character of the support of these roads; (2) the magnitude and character of the road systems; (3) the administration of these roads; (4) the ability and willingness of the public to support these roads from "local" income sources; (5) the long-term dependability of these "local" revenue sources, and the methods by which they are made available for road work. The investigation has so far been centered primarily upon the first two.

The next step in the analysis involved comparisons for individual States, and

among the States, of the relative magnitudes of the total current receipts made available for county and local rural roads, the county and local receipts made available, and the State and Federal funds received. To facilitate comparison of values for different States the dollar amounts for each State were converted to index-number-percentage relationships to the total current funds received in 1939 for application to these highways.

The facts developed in this analysis appear to be sufficient to support the following findings:

1. Between 1923 and 1945 there was an unmistakable trend toward the increasing support of county and local rural roads with State funds. Although the trend has been slowed considerably since 1939, it will probably be accelerated again in the event of another depression.
2. In general, the level of total current funds made available for county and local rural roads either remained relatively steady or increased somewhat between 1923 and 1945.
3. Considering trends in total support and mileage transfers, there appears to be a logical basis for inferring that there has been a generally upward trend in the intensity of expenditures made on the rural secondary and local systems.
4. Increases in State support of county and local rural roads have usually been accompanied by decreases in support from local sources, thus defeating the stated purpose of the increased assistance in many instances.

The data compiled for certain States provide evidence of considerable untapped ability to support county and local roads from local property-tax levies. This situation warrants further study.

It is common knowledge that during the past twenty-five years there has been a considerable change in the methods by which secondary and local rural roads have been financed in the various States. However, compilations of data that would permit analysis and comparisons of these trends for groups of States have been notably lacking up to the present, and such discussions of the subject as have taken place have usually been limited to one or two or, at most, only a few States.

The current widespread interest in long-range highway planning has focused considerable attention upon the problem of support of secondary and local rural roads. Numerous philosophies as to how these roads should be financed in the future, varying from complete local support to complete State support, have been propounded, but none has yet received general acceptance.

Because of its legitimate interest in long-range highway planning generally, and because of its interest in the proper allocation and use of Federal-aid secondary road funds, the Public Roads Administration recently undertook to investigate the extent, reasons for, and implications of the trends that occurred in the financing of secondary and local rural roads during the past 25 years. This paper presents some of the preliminary findings of the study.

#### SCOPE AND LIMITATIONS OF PROJECT

The over-all plan for the project provides for two lines of investigation. The first is a statistical compilation and analysis of such information as is available about the amounts of income of various types used in individual States to finance their secondary and local rural roads during the past 25 years. The second is an intensive study of specific local revenue sources which is intended to yield information that will aid with the analysis and interpretation of the statistical compilations. It was planned that this study would consider such matters as the extent of reliance by counties and local units upon property taxes as compared with other local income sources; the nature of assessment laws and procedures in effect, and the relationships (both theoretical and actual) between assessments and full value; the nature of property taxes levied—whether general (for general-fund purposes) or specific; actual tax rates as compared with constitutional or statutory limitations; debt limitations; and the productivity of revenue sources of counties and local units during “good” and “bad” times.

The lack of adequate or sufficiently accurate financial statistics necessitated limiting the coverage of the investigation to the period from 1923 through 1945, and for that period

usable data were available for only 27 States. Fortunately, the distribution of these according to both geography and character of secondary and local rural road operations was satisfactory. Other factors dictated a further limitation—the restriction of the compilation and analysis of statistical data to the odd-numbered years of the period covered. The completeness and accuracy of the fiscal data compiled for the years from 1935 through 1945 are believed to be good in all cases, but only fair in most for the earlier years.

Federal work-relief funds spent directly for highway purposes during the 1933–42 period carried a considerable portion of the financial burden for the support of secondary and local roads in those years. For that reason it would have been desirable to include them in this study. This was not possible, however, because of the unavailability of data for individual States for any year prior to 1939.

In a number of States extensive transfers of road mileage from the secondary or local to the State primary systems occurred during the period covered by this study. There were also a few sizeable mileage transfers in the opposite direction. These unquestionably had some influence upon the magnitude of the funds applied to secondary and local rural roads in those States. Unfortunately, however, accurate road-mileage data for secondary and local roads are not available for many States for any year prior to that in which the rural-road inventory of the highway planning survey was made. Consequently, it has been possible to indicate in this report only a part of the correlation between changes in mileage on the secondary and local rural road systems and the funds applied for their support.

Another factor that prevented extension of this study to cover years prior to 1923 was the lack of adequate functional or administrative classification of the rural roads in many States in the earlier years. For example, Mississippi's State highway system was not created until 1924; that of Arkansas in 1923; and those of Louisiana, Minnesota, and Nebraska in 1921. In several States, Kansas, for example, the so-called State highway systems were still the direct responsibility of counties or local units as late as 1925. These situations effectively precluded the segregation from the data available of current receipts applied to secondary or local rural roads.

#### ANALYSIS METHODS

The inclusion of borrowings in a long-term study of receipts would result in duplications, because of the inclusion, in data for years succeeding that of the original borrowing, of the funds used to repay the loans, unless separate subtotals of funds used for current purposes and funds used for debt retirement were carried throughout. Consequently, only current receipts of the States and their subordinate units that were applied for secondary and local road purposes were included in this study. Receipts used by any of these units for other classes of roads—mainly State highways and streets in incorporated places—were excluded insofar as possible.

In analyzing the data for the earlier years considerable difficulty was encountered on the one hand in eliminating aids received by the counties and local units from the States as reimbursement for expenditures made by them upon State highways, and on the other in obtaining the amounts of revenue applied directly by the States upon county and local rural roads. Federal funds received by States or their subordinate units for expenditure upon these roads were included when they could be identified.

The first step in the analysis phase of the project was to attempt to group the 27 States studied according to the type of trend in the percentage of support for secondary and local rural roads, classified functionally rather than administratively, obtained from county and local sources that was exhibited over the 23-yr. period. The three accompanying maps, Figures 1, 2, and 3, indicate the geographical distribution of these States, and the major percentage classifications on the basis of local support into which they fell in 1923, 1935, and 1945. The "unshaded" States were not included in the study.

In 1923 the secondary and local rural roads of all States were under the jurisdiction of counties or local governmental units. At that time these roads were supported almost exclusively from direct receipts of the counties or local units; in only three of the 27 States covered by this study (Michigan, Montana, and Oklahoma) did the percentage of local support fall under 80 (See Fig. 1).

By July 1, 1935 direct responsibility for the construction, maintenance, and operation

of all secondary and local rural roads had been assumed by the State in three instances (Delaware, North Carolina, and West Virginia). In another State (Virginia) a similar transfer

cial burden of the debt service. Although unique with respect to the complete transfer of operational responsibility, the situation that developed in these four States merely repre-

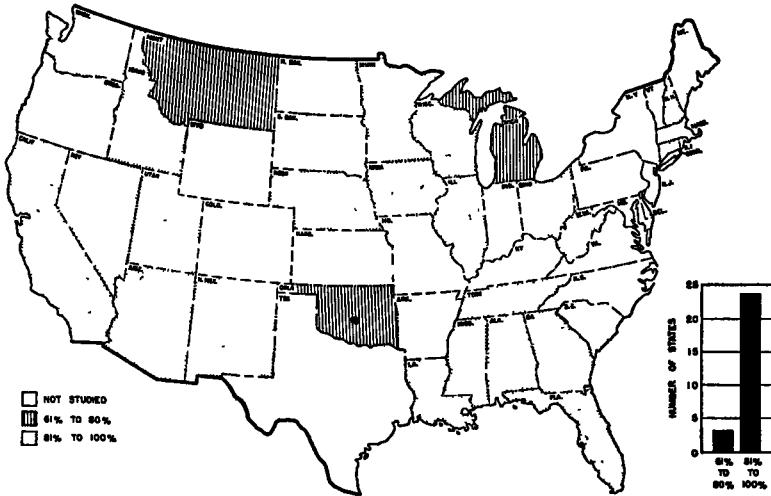


Figure 1. Percentage of County and Local Rural Road Revenues Obtained from County and Local Sources in 1923

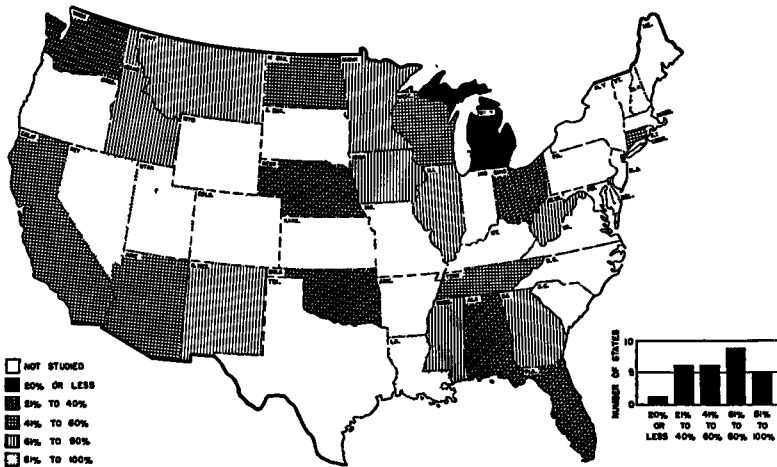


Figure 2. Percentage of County and Local Rural Road Revenues Obtained from County and Local Sources in 1935

of authority had been made in all but three of the State's 100 counties. In all four States the counties continued to be responsible for servicing outstanding local-road debt. However, the State of Delaware assumed the finan-

sent the culmination of trends toward shifting the responsibility for support of these roads from the subordinate governments to the State that were almost universally evident.

Figure 2 portrays the situation as it existed

in the 27 States in 1935. At this time in only five States did more than 80 percent of the support for secondary and local rural roads—still nominally under county or local jurisdiction in all but one of these States—come from county or local revenue sources. The number of States in which this percentage was from 61 to 80 had increased from three in 1923 to nine in 1935, but only one of the original three (Montana) remained in this class. In six of these States the county or local contribution then amounted to 41 to 60 percent; in six it

the State had assumed direct responsibility for construction, maintenance, and administration of such roads. The funds raised locally in West Virginia were applied to debt service, and amounted to 22.5 percent of the total of current receipts raised for these roads.

Although Figures 1, 2, and 3, provide unquestionable evidence of a general trend away from the use of county and local receipts to support secondary and local roads, they leave unanswered the most important technical questions that will be raised about what has

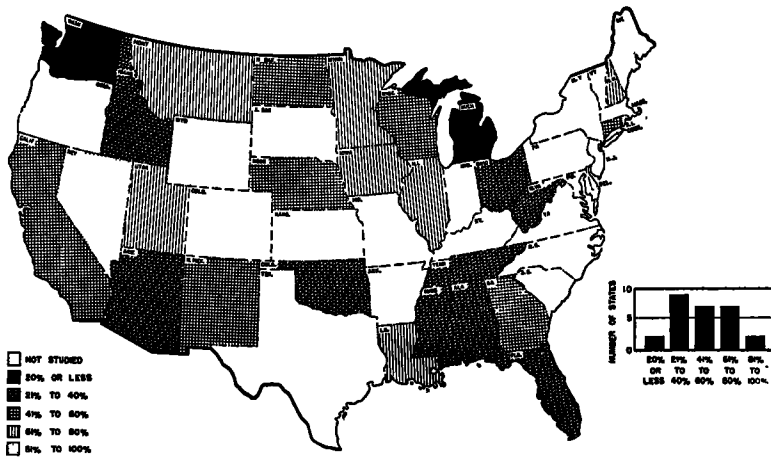


Figure 3. Percentage of County and Local Rural Road Revenues Obtained from County and Local Sources in 1945

was between 21 and 40 percent; and in one (Michigan) it was only 11.5 percent.

That the trend of decreasing county and local support continued to 1945 is evidenced by Figure 3. By then the number of States in which such sources furnished more than 80 percent of the funds applied had declined to two (Nevada and Rhode Island). The 61 to 80 and 41 to 60 percent groups contained seven States each; the 21 to 40 percent group contained nine; and the remaining percentage group, where the county-local contribution did not exceed 20 percent, contained two (Michigan and Washington). One situation worth noting was that in both Michigan and Washington, where counties or local units were still responsible for administering the secondary and local roads, the county or local contribution toward the financing of these roads was less than was the case in West Virginia where

taken place, and the significance of these happenings. These questions may be classified generally into five major groups:

1. Questions relating to the magnitude of the funds from each source applied to rural roads which were completely under county or local jurisdiction in 1923;
2. Questions relating to the magnitude and character of the road systems to which these funds were applied;
3. Questions relating to the administration of such roads;
4. Questions relating to the demonstrated ability and willingness of the public to support these roads from "local" income sources;
5. Questions relating to the long-term dependability of the county and local revenue sources used to finance these roads, and to the various methods through which these funds are made available for highway work.

Although the research project upon which this report is based will eventually go as far as is practically possible into all of these five avenues of inquiry, the investigation has so far been concentrated largely upon the first one listed. It was recognized that a declining trend in the percentage of total support for secondary and local roads that was raised locally might result from any of a number of possible situations. For example, such a trend might have been produced by a combi-

applied, and the magnitude of current State and Federal receipts applied.

The amounts of money collected in the individual States varied widely, as was to be expected. This would render comparisons on a dollar basis extremely difficult to evaluate. Consequently, it was decided to express all such data for each State in terms of their relationships to an index base, the total current receipts applied for county and local rural roads in 1939, or, in the case of West Virginia,

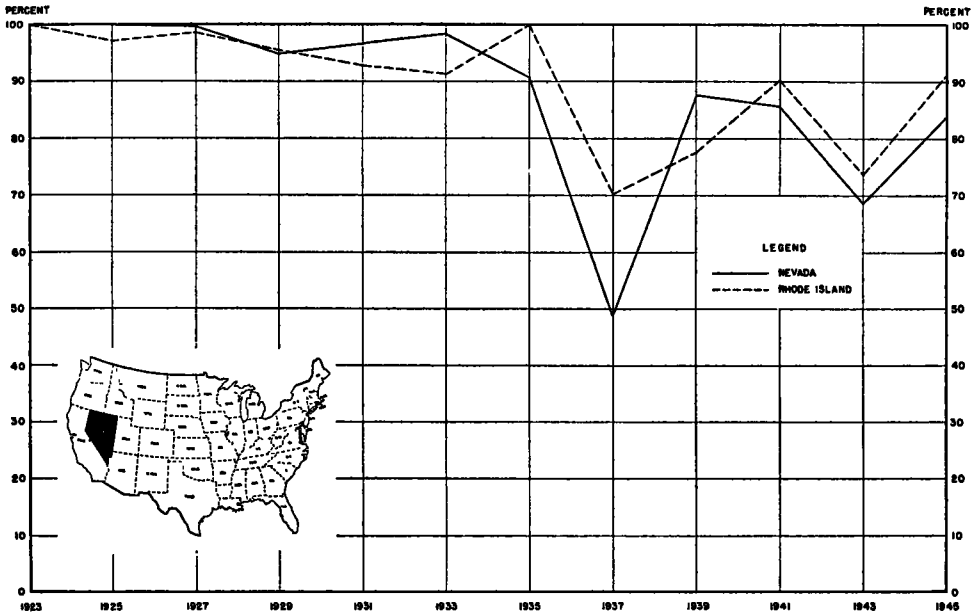


Figure 4. Percentage of County and Local Rural Road Revenues Obtained from County and Local Sources in 2 States in Alternate Years, 1923 to 1945

nation of relative stability in the total funds applied with a consistent decline in the portion provided by local revenue sources, or by a combination of a consistent level of local support with a constantly increasing total of all funds applied to these roads.

In order to provide a convenient classification of the 27 States for purposes of furthering analysis it was decided to group them according to the percentage-of-local-support distribution shown in Figure 3. The States in these groups were then compared on the basis of percentage of total current support received from county or local sources, the magnitude of total current receipts applied, the magnitude of current receipts of counties and local units

the total funds applied to roads that had been under county or local jurisdiction prior to their transfer to the State in 1935.

EVALUATING THE APPARENT TRENDS

Figures 4 through 8 indicate the trends in percentage of county and local rural road revenues obtained from county and local sources for the 27 States combined according to the groupings adopted for Figure 3. Considering all of these figures together, the first situation to be observed is the relative absence of regionalism in the groupings. This is particularly true of the high, middle, and low percentage groups (Figs 4, 6, and 8). Figure 5, the second-highest percentage group, contains

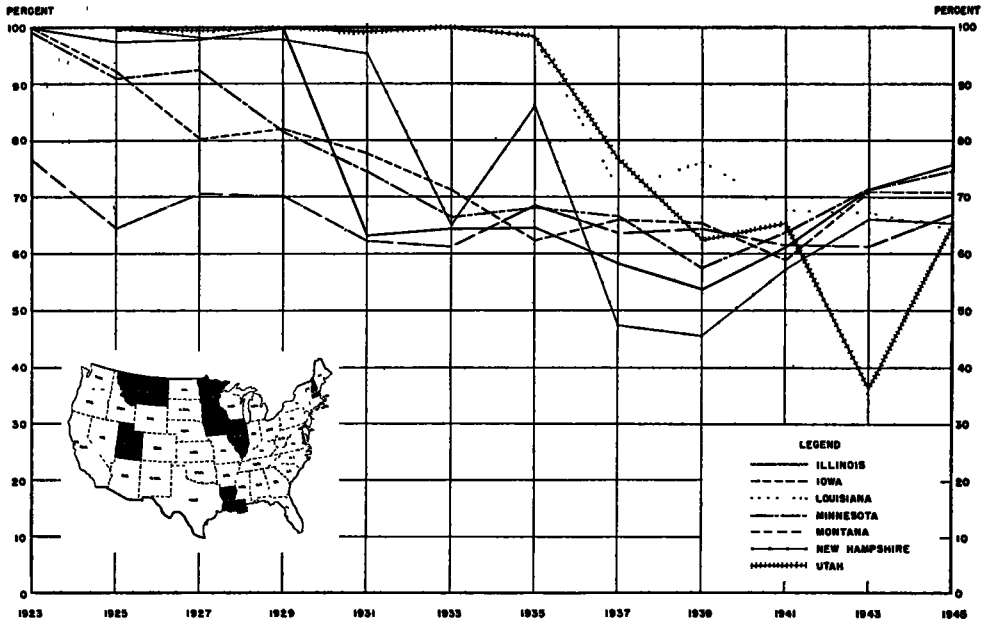


Figure 5. Percentage of County and Local Rural Road Revenues Obtained from County and Local Sources in 7 States in Alternate Years, 1923 to 1945

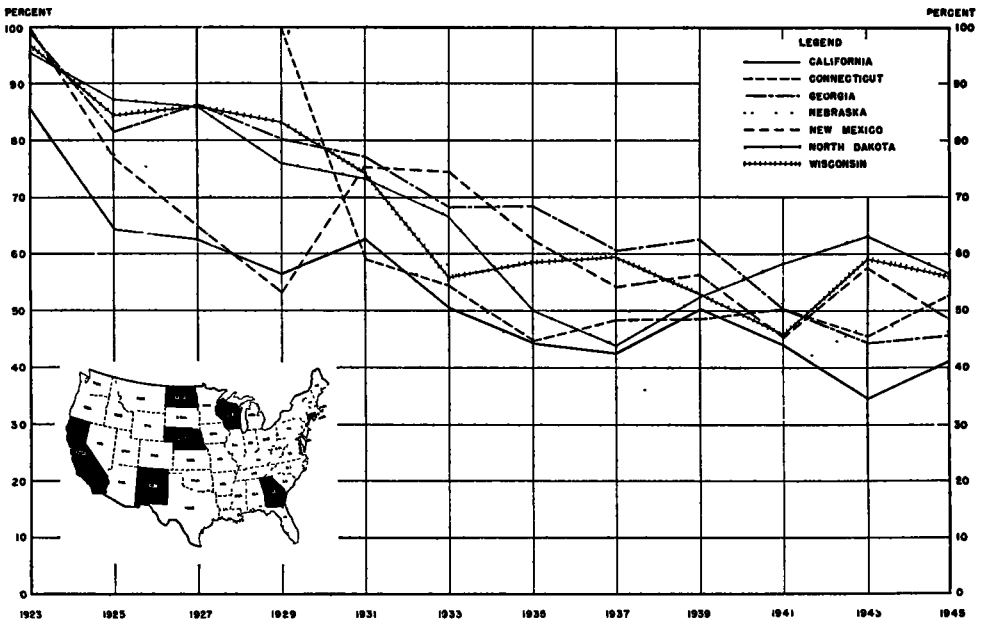


Figure 6. Percentage of County and Local Rural Road Revenues Obtained from County and Local Sources in 7 States in Alternate Years, 1923 to 1945

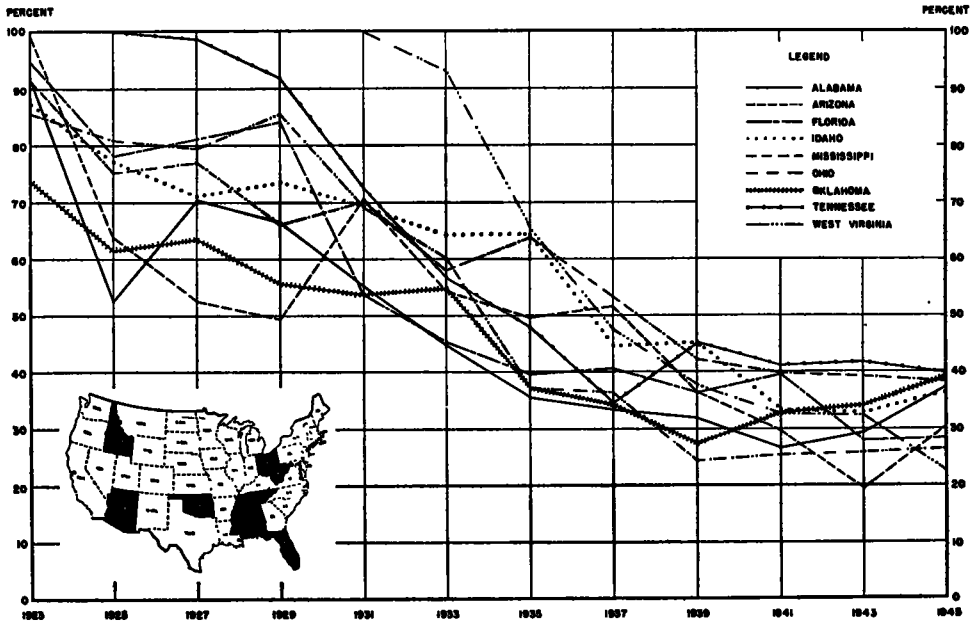


Figure 7. Percentage of County and Local Rural Road Revenues Obtained from County and Local Sources in 9 States in Alternate Years, 1923 to 1945

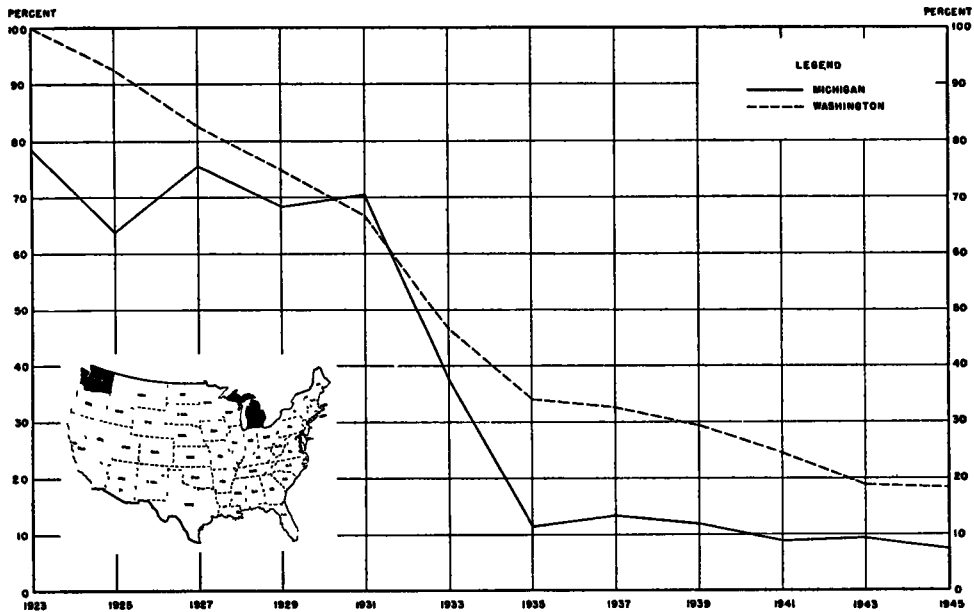


Figure 8. Percentage of County and Local Rural Road Revenues Obtained from County and Local Sources in 2 States in Alternate Years, 1923 to 1945



three States that are contiguous—Illinois, Iowa, and Minnesota. But it also contains four other States that are widely scattered—New Hampshire, Louisiana, Montana, and Utah. Figure 7, the second-lowest percentage group, contains four Southern States—Florida, Alabama, Mississippi, and Tennessee. However, it also contains five additional States not in that area—Ohio, West Virginia, Oklahoma, Arizona, and Idaho.

It is pertinent to inquire whether the arbitrary assumption of 20-percent increments for the establishment of these groupings could have resulted in splitting up significant geographic groupings. The 1945 percentages of local support in Illinois, Iowa, and Minnesota were 76, 71, and 75 respectively. Among the nearby States included in the study were Wisconsin, with 56 percent county and local support; Nebraska, with 46 percent; and North Dakota, with 57 percent. Only a very broad classification on a percentage basis could have brought these States into a single group.

The 1945 percentages of local support in Florida, Alabama, Mississippi, and Tennessee were 28, 38, 38, and 40 respectively. Among the surrounding States studied were Georgia, with 46 percent; Louisiana, with 65 percent; and West Virginia, with 22 percent. A regrouping of the States on a 25-percent increment basis would have brought Georgia into the group with Florida and other nearby States, but it would have had disadvantages which appeared to outweigh its advantages.

Little similarity as to degree of urbanization or general economic characteristics is to be observed in the individual groupings. Nevada and Rhode Island; Montana, Illinois, Louisiana, and New Hampshire; California, North Dakota, Georgia, and Connecticut; Idaho, Ohio, and Florida; Washington and Michigan—all these are examples of widely dissimilar States that are grouped together.

The trends in percentage of county and local support of secondary and local rural roads exhibited for the States in each of these individual groupings are remarkably similar. However, in a number of the States scattered throughout the several groupings (Illinois, New Hampshire, Wisconsin, Florida, Ohio, Tennessee, and Michigan) the trends also exhibited certain similar characteristics: Moderate declines during the early period (from 1923 to about 1931), rapid declines dur-

ing the middle period (from about 1931 to about 1939), and relative stabilization with some tendency to increase in the later period (since about 1939).

Figures 9 through 13 present data that indicate for the individual States the relationships between county and local revenues, combined State and Federal revenues, and total revenues made available for county and local roads throughout the period from 1923 to 1945. Each panel contains a diagram for each of the States within one of the groupings according to percentage of support from local sources that have just been discussed. The reduction of all these relationships to an index-number-percentage basis eliminates the difficulties attendant upon the comparison of widely different absolute amounts.

From Figure 9 it is evident that in Nevada, except for peaks in 1927, 1937, and 1943, the level of total current receipts made available for county and district roads has remained relatively stable. The 1937 and 1943 peaks in the total funds available were matched by abnormally high levels of combined Federal and State contributions, which were otherwise relatively insignificant. County and local contributions remained relatively stable except for an upward bulge in the 1927-1931 period. The present road mileage under county and district control is about 18,000. It appears that some 2,000 miles of highway were transferred from the county and local to the State system between 1924 and 1942, but nearly 300 miles have been transferred in the other direction since 1942.

The data for Rhode Island, on the other hand, indicate a somewhat different situation. The total current receipts made available for town highways appear to decline by about 50 percent from 1929 to 1935, after which the level of these funds appears to remain fairly constant. A similar pattern is exhibited by the local receipts curve. However, these trends may be more apparent than real because it is not possible to determine accurately from the data available whether the data compiled for the earlier years include information for some of the urban towns of the State. These are excluded from the compilations for 1935 and succeeding years. The total mileage on the rural town road system is now about 1,700. There were no sizable mileage transfers from it to the State system between 1923 and 1945;

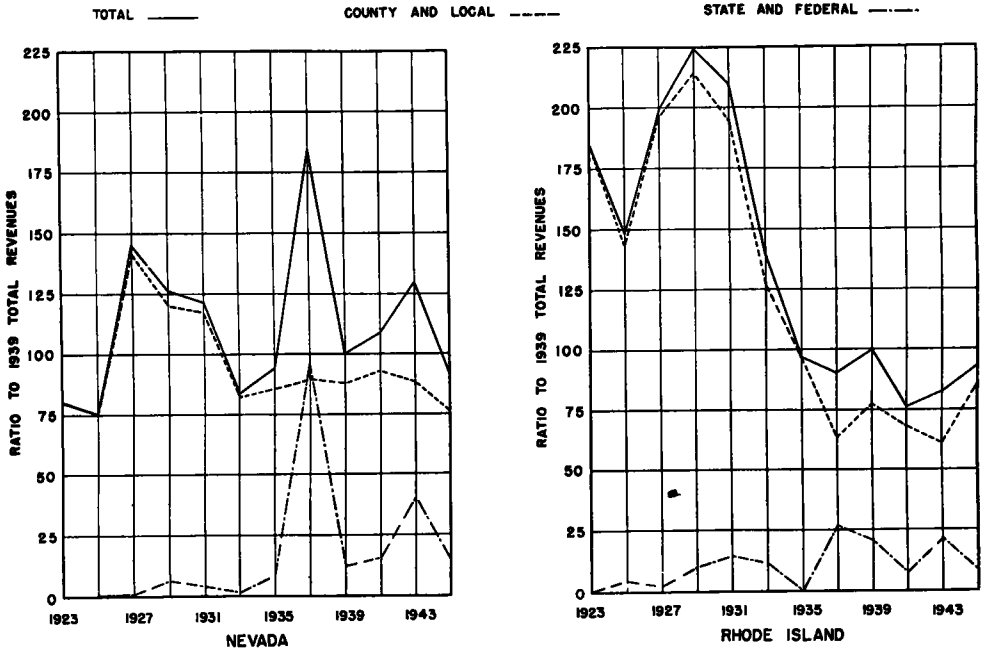


Figure 9. Indexes of Revenues for County and Local Rural Roads in 2 States in Alternate Years 1923 to 1945 (1939 Total Revenues = 100%)

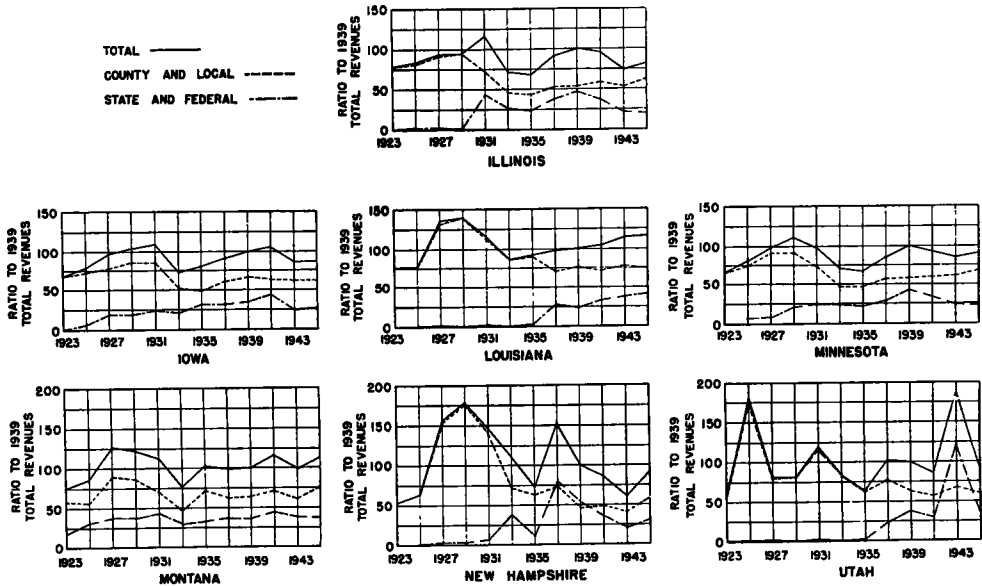


Figure 10. Indexes of Revenues for County and Local Rural Roads in 7 States in Alternate Years, 1923 to 1945 (1939 Total Revenues = 100%)

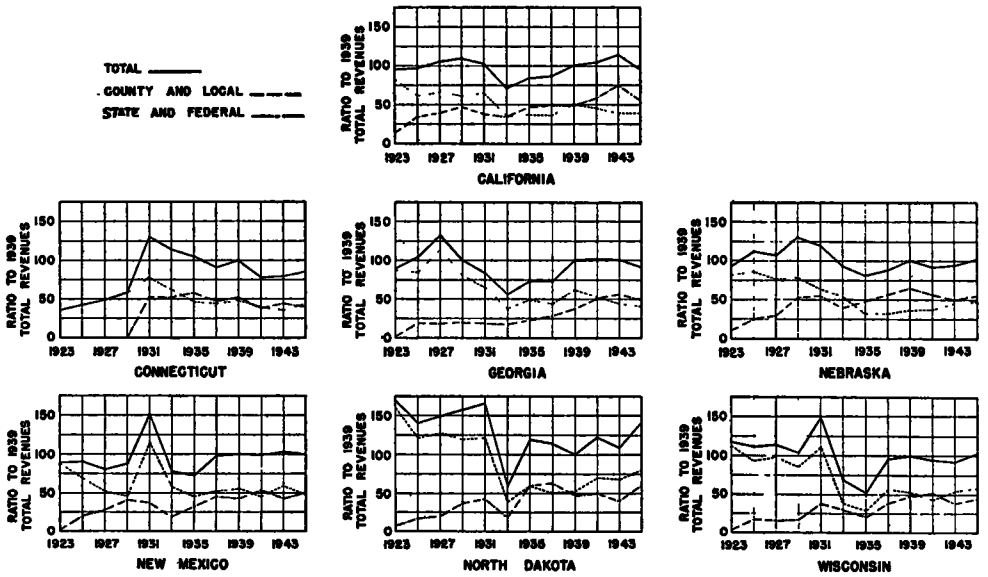


Figure 11. Indexes of Revenues for County and Local Rural Roads in 7 States in Alternate Years, 1923 to 1945 (1939 Total Revenues = 100%)

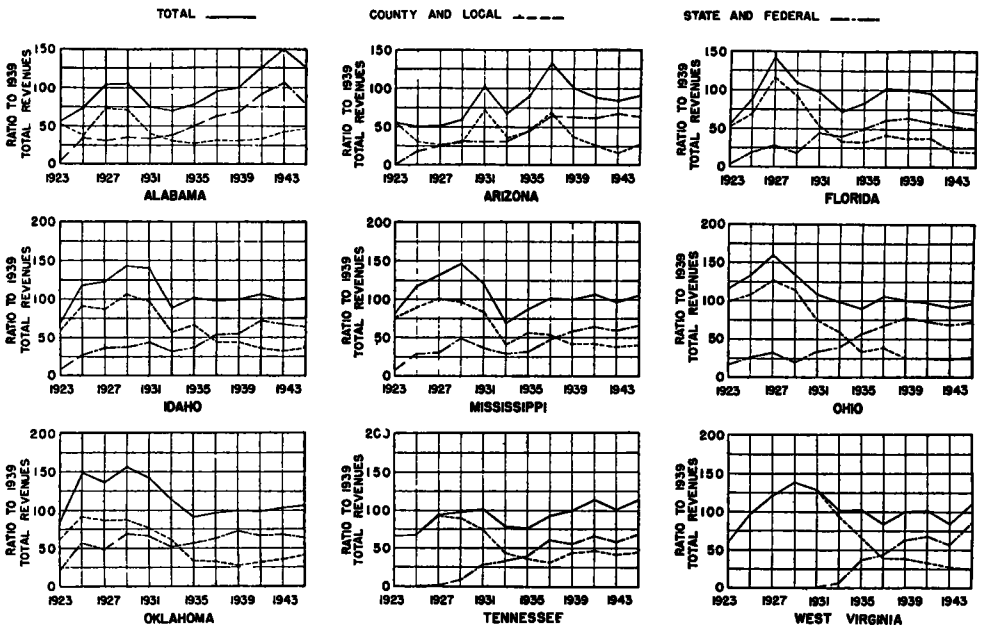


Figure 12. Indexes of Revenues for County and Local Rural Roads in 9 States in Alternate Years, 1923 to 1945 (1939 Total Revenues = 100%)

there was, however, one transfer of some 300 miles from the State system in 1938.

The States for which data are shown in Figure 10 can be classified into two subgroups: Those in which the totals of current receipts of counties or local units made available for county and local roads have remained relatively stable, and those in which these totals have fluctuated considerably. The first group of States includes Illinois, Iowa, Minnesota, and Montana; the second, Loui-

rent receipts made available for secondary and local roads remained generally constant.

Combined Federal and State contributions for work on county and local rural roads have comprised a larger part of the total funds available for such work in the States for which data are presented in Figure 10 than was the case with the two for which information is shown in Figure 9. However, the contributions did not reach the level of county and local contributions except for isolated instances

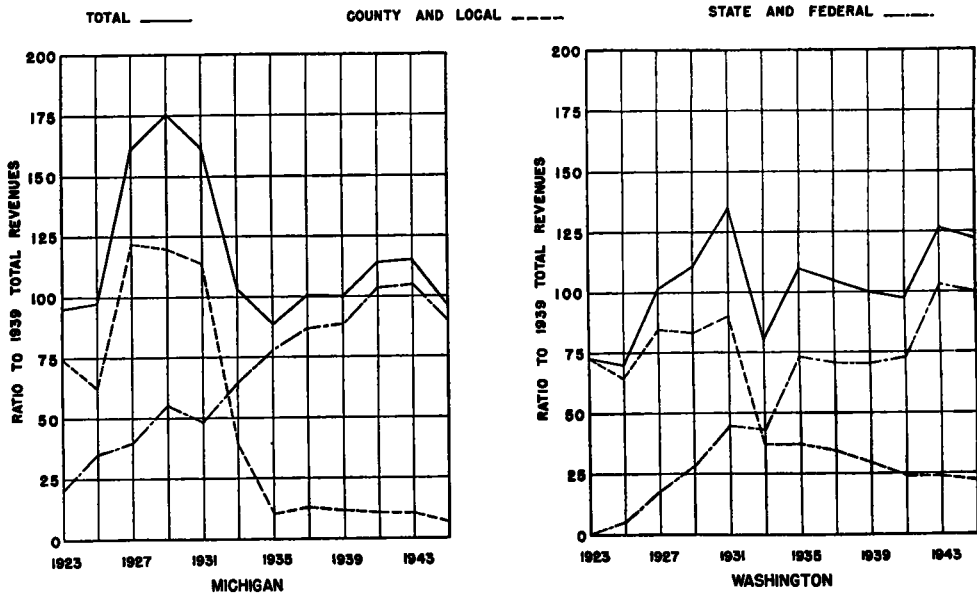


Figure 13. Indexes of Revenues for County and Local Rural Roads in 2 States in Alternate Years, 1923 to 1945 (1939 Total Revenues = 100%)

siana, New Hampshire, and Utah. The information available for 1923 and 1925 for Illinois, Montana, Louisiana, and Utah is of questionable accuracy; and the possibility that some funds raised for use on State highways or city streets may have been included casts some doubt upon the value of all the information shown for New Hampshire for years prior to about 1935. If the data obtained for 1923 and 1925 in the cases of New Hampshire, Louisiana, and Utah were to be taken at face value instead of being discounted, it could be said that the trend of county and local contributions in these States also has held relatively constant. In all instances the levels of total cur-

rent receipts made available for secondary and local roads remained generally constant. The Utah instance reflected the expenditure in 1943 of \$1,725,000 of Federal-aid funds (largely for defense projects) upon rural roads under county or local control.

Combined State and Federal contributions for county and local rural roads were at or near zero in all these States except Montana in 1923. The counties of that State shared in the income from the State motor-vehicle-registration taxes throughout the period covered by this study. In Illinois and New Hampshire State contributions for secondary and local rural roads spurted upward during the depression years and so helped to replace

the losses in incomes from property taxes, which were then slumping badly. This latter condition was, of course, common to all of the States in this group, but in the others there were no significant increases in State contributions for county or local rural roads between 1929 and 1933.

An unusual situation is reflected in the data presented for Louisiana. Between 1935 and 1937 the law permitting parishes to impose local motor-fuel taxes was repealed, but the parishes were given a portion of the income from the State motor-fuel tax which had been increased from 5 to 7 cents in 1936. This apparently more than matched their lost revenues.

Important mileage transfers between the county and local systems on the one hand and the State-administered system on the other occurred in all of these States between 1923 and 1945. However, the relationship of these transfers to local-road financing is not always as obvious as it was in the case of Minnesota. The legislature of that State transferred 4,356 miles of rural county roads to the State trunk system in 1934 after considerable pressure to do so had been brought by county and local officials. Between 1929 and 1933 county and local revenues for rural roads under county and town control had declined from \$20 million to \$10 million, and many of these units were in desperate financial straits. However, with the easing of the depression county and local contributions for highways began a steady increase which continued through 1945 when about \$15 million was realized from this source. The counties and towns were responsible for administering nearly 100,000 miles of rural roads in 1945.

Transfers of mileage to the State systems in Louisiana and Utah between 1931 and 1935 also appear to have been closely related to the local financial situations in those States. Transfers of mileage from the Louisiana parishes to the State of 1,000 miles or more occurred in 1926, 1928, and 1930. In 1931 a similar transfer of 6,600 miles was made. These transfers of responsibility appear to have been reflected in the level of total current income for secondary and local rural roads which dropped from \$10 million in 1929 to \$6 million in 1933. In 1945 the Louisiana parishes were responsible for about 20,000 miles of rural roads.

In 1931 the counties of Utah raised \$2.2 million to finance their roads. By 1935 they were raising only about \$1.2 million for this purpose. They were receiving little or no aid from the State for road purposes. However, nearly 700 miles of county road were transferred to State control in 1931, and about 500 miles additional were added to the State system in 1934 and 1935. Following 1935, the State began to make sizable contributions toward the financing of county roads. In 1945 the counties were administering about 15,500 miles of rural roads.

The chief characteristic that appears to distinguish the States for which data are presented in Figure 11 from those for which data are presented in Figure 10 is the relatively larger contributions toward the support of county and local roads received from combined State and Federal sources. In 1945 contributions from these sources were greater than county or local current receipts in Georgia and Nebraska; the incomes from both sources were approximately equal in California and New Mexico; while county and local contributions were somewhat higher than State contributions in Connecticut, North Dakota, and Wisconsin.

In Georgia, Nebraska, California, North Dakota, and Wisconsin the data available indicate relatively steady and more or less sharp declines in the amount of county and local current income applied to secondary and local rural roads from 1923 until about 1933, after which the level of such receipts either stabilized or recovered slightly. In Connecticut although the level of local support has fluctuated considerably, the average from this source has remained relatively constant. In New Mexico county revenues applied for county roads fluctuated considerably prior to 1935 but remained relatively stable thereafter.

In Georgia, Nebraska, California, North Dakota, New Mexico, and Wisconsin the practice of using State-collected revenues for the support of county and local roads was well-established prior to 1931, and the level of such support has generally continued to increase since then. In Connecticut the general level of State participation—which includes both direct State expenditures on town roads and payments of aids—was relatively stable from 1931 to 1945. During the war years when the towns could not take up all the State funds

normally made available the State highway department was permitted to borrow from this source to help finance its own activities. This accounts in part for the apparent decline in State support during those years.

A rather interesting legislative development is reflected to some extent in the data shown for Wisconsin in Figure 11. In 1931 the State legislature exempted registered motor vehicles from taxation as personal property but provided that each town, village, or city should receive from the State, in lieu of previous tax collections from this source, an amount equal to 20 percent of the motor-vehicle registration taxes collected on vehicles located there, or an amount equal to the property taxes on motor vehicles collected by the municipality in 1931, whichever was greater. This aid was not earmarked for highway purposes, but a considerable portion of the funds received from this source has been spent upon local roads or streets. In the same year the legislature also doubled the aids paid specifically for town roads and city and village streets. At the same time the State motor fuel tax rate was increased from 2 to 4 cents. However, the full effect of these increases in the aids provided for counties and local units was not felt between 1931 and 1935 because of decreases in the income from State motor-vehicle registration taxes and action by the State Emergency Board in withholding some of the aids due the subordinate units.

Although transfers of county or local road mileage to or from the State system occurred between 1923 and 1945 in all the States in this group, it was only in California, Georgia, and Nebraska that there appeared to be a direct relationship between the mileage transfers and the program of financial support. Between 1931 and 1933 the magnitude of current county and local funds raised in California for county and local rural road purposes declined from about \$18 million to \$10 million, and remained at about that level until 1937. On the other hand, in 1933 and 1934 more than 6,000 miles of road were transferred from the counties and local units to the State. In 1945 approximately 75,000 miles of road remained under the control of the counties and road districts.

In Georgia revenues raised locally for county roads declined from \$13 million in 1927 to about \$4 million in 1933. During this period State support of these roads remained prac-

tically constant, at about \$2 million annually. This decline in the support of such roads was accompanied by the transfer to the State of about 2,000 miles of highway between 1930 and 1932, and an additional 1,500 miles in 1936 and 1937. Following 1939 another decline in local revenues for county roads began which continued through 1945, and which was only partially offset by a somewhat increased level of State participation. Between 1939 and 1942 about 2,500 additional miles of rural roads were transferred from the counties to the State. However, in 1945 the counties still had nearly 86,000 miles of highways under their jurisdiction.

In Nebraska annual local revenues raised by counties and townships for secondary and local roads declined from \$7.5 million in 1925 to less than \$3 million in 1935. Although State support of such roads increased throughout most of this period, the total current receipts available for these roads decreased steadily from 1929 through 1935. However, during the 11 years from 1925 through 1935 more than 6,000 miles of highway were transferred from the county and local systems to the State system. A transfer back to local jurisdiction in 1938 of about 2,600 miles of unimproved "statutory" State highways, upon which the State was spending nothing for maintenance, did not actually alter the picture of shifting responsibility from the subordinate units to the State. However, the counties and townships were still responsible for more than 90,000 miles of highway in 1945.

All of the States for which data are shown in Figure 12 have at least two characteristics in common: A steadily declining level of county and local support of their secondary and local roads, and a steadily increasing level of combined State and Federal support of these roads. The result, when the two curves are plotted on the same chart is the "scissors" effect so clearly shown in all of the diagrams on this panel.

In the matter of the total amount of current receipts made available for secondary and local highways there is not the same uniformity. In three of the nine States—Alabama, Arizona, and Tennessee—there is evidence of a steady increase in this total. In five states—Florida, Idaho, Mississippi, Oklahoma, and West Virginia—there are evidences of relative stability in the total funds made available,

over most of the period, at least. In only one State, Ohio, is there any evidence of a real long-term decline in this total, and it is relatively moderate.

Sizable mileage transfers between the secondary and local rural road systems on the one hand and the State system on the other occurred in Alabama, Florida, Mississippi, Ohio, and West Virginia. The Alabama transfers included the shifting of 1,700 miles to the State system in 1928 and 900 miles in 1934. These two transfers were accompanied by declines in the total current funds raised by the counties for road purposes. The counties continue to be responsible for a large road mileage; the total was 53,000 miles in 1945.

The Florida mileage changes include transfers in both directions, some of which cannot be evaluated because of the inadequacy of existing mileage data. It is evident, however, that considerable mileages of rural roads were added to the State system in 1927, 1931, 1934, and 1935. These accompanied a steadily declining trend in current county revenues made available for highway purposes. In 1937 a "paper" transfer of about 5,300 miles of roads, nominally on the State system but actually not maintained by the State, was effected by which these roads were returned to the counties. In 1945 the counties were responsible for nearly 30,000 miles of road.

The Mississippi transfers of 1929 and 1930 are of interest, although their direct relationship to the local-road finance problem in that State is not clear from the data available. In 1929 the State added 2,600 miles of unimproved earth roads and 500 miles of gravel roads to its primary system, but in 1930 the legislature returned 4,200 miles of earth roads to county jurisdiction. In 1945 the counties were responsible for 54,000 miles of rural roads.

Important transfers of rural road mileage from the county and township systems to the State system occurred in Ohio in 1934, 1936, 1937, and 1938, a period during which county and local revenues for application on these roads were declining rapidly. Although more than 6,000 miles of road were transferred to the State system in these four years, the counties and townships still retained responsibility for nearly 70,000 miles of rural roads.

Prior to 1933 the State of West Virginia had made no contribution towards the support of county roads. On July 1 of that year the ad-

ministrative responsibility for the entire 30,000-mile county-road network was transferred to the State Road Commission by legislative enactment. The counties continue to be responsible for servicing their outstanding road debt, which exceeded \$30 million in 1933. When these obligations are retired the counties will be relieved of all responsibility for the support of these roads.

Of the group of States included in this study, the two for which data are presented on Figure 13, Michigan and Washington, have gone farthest toward removing the burden of financing county and local roads from property taxation and other local revenue sources. Neither has yet seen fit, however, to transfer the administrative responsibility for these roads to the State, as has been done completely in Delaware, North Carolina, and West Virginia, and almost completely in Virginia.

The principal reason for the shift in sources of support was the same in both States: The virtual collapse of the property tax as a source of support during the depression years. According to the Michigan highway-needs study report property-tax delinquencies in that State had reached a record high of 40 percent in 1934. The situation in Washington must have been nearly as bad. The result was strong agitation for increased support of county and local roads from State revenue sources.

The ultimate result in Michigan has been the turning over to the counties the entire proceeds of the State weight (motor-vehicle registration) tax, plus a sizable portion of the income from the motor-fuel tax. In Washington the result has been the transfer to the counties and local units of an increasing share of the proceeds of both the State registration and fuel taxes.

It is significant to observe that in Washington the total current income for county and local roads increased considerably over the 1923-1945 period. In Michigan, on the other hand, the level has remained approximately stable, except for an upward spurt between 1927 and 1931.

There were no significant intersystem mileage transfers in Michigan between 1923 and 1945. In Washington, on the other hand, 2,300 miles of county highways were transferred to the State in 1937 to form a "secondary" system. In 1945 the Michigan counties had 84,000 miles of road under their juris-

diction, while in Washington the counties and townships were responsible for 40,000 miles.

#### CONCLUSIONS

The factual data presented in this progress report are sufficient to warrant certain findings that it is believed will be substantiated when the entire research project is completed. The more important of these findings are as follows:

1. Between 1923 and 1945 there was an unmistakable trend toward the increased support of county (secondary) and local rural roads with State-collected funds. Although this trend seems to have been slowed considerably since 1939, it will probably be accelerated again in the event of another depression.
2. In general, the level of total current funds made available for county and local rural roads either remained relatively steady or increased somewhat between 1923 and 1945. (Of the 27 States studied, the situation remained relatively stable in 18, increasing trends were noted in 7; only 2 showed declining trends.) Price-level increases during recent years have undoubtedly negated some of the increases in the dollars made available.
3. On the basis of the finding concerning trends in over-all support, and in view of the sizable mileage transfers from county and local to State systems that have occurred in many States, it may be inferred that there has been a generally upward trend in the amount of expenditures per mile made on the rural county and local systems.
4. Increases in State support of county and

local rural roads have usually been accompanied by decreases in support from local sources. This has defeated the stated purpose of the increased assistance in many instances.

The data analyzed for certain States also provide evidence of considerable untapped ability to support county and local rural roads from local property-tax incomes. However, the actual amounts of additional taxes that could be imposed without passing the present limit of the taxpayers' ability to pay them can only be estimated after a careful study into the total magnitude of present tax burdens (including all taxes levied for all purposes). This situation warrants further study.

From this point on the activities of this research project will be centered largely upon obtaining and analyzing information that will make possible a more complete interpretation of the material already compiled. Matters to be investigated will include the effectiveness of the administration of these roads in the individual States measured from the financial standpoint; the equity and productivity of local property taxation as now administered; arbitrary limitations upon property taxation through assessment limitations and practices, limitations upon levies, property tax exemptions, etc.; limitations imposed upon county and local borrowing for highway purposes; the extent to which the use of State-collected revenues for the support of county and local rural roads has affected the State's primary-road programs; and the extent to which local income sources other than property taxes might be tapped for the support of county and local rural roads.