

REPORT OF THE DEPARTMENT OF HIGHWAY FINANCE

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PROBLEMS OF FINANCIAL ADMINISTRATION WITH SPECIAL REFERENCE TO LOCAL ROADS AND STREETS *

SYNOPSIS

In 1936 approximately a quarter of a billion dollars, or one-fourth of total State motor vehicle collections, were distributed for local road and street purposes. This was more than double the amount distributed in 1927. However the increase in the part of the total collections so distributed has only been 3 percent.

The amount of State funds spent on State roads has also increased in this 10-year period, but by only 42 percent as compared with the 115 percent increase in local road apportionments. Moreover, there has been an actual decrease of 17 percent in the share of total State taxes so used. This discrepancy appears to result from a wholesale use of funds for other than highway purposes.

The amounts and methods of distributing user taxes going to local units of government vary widely from State to State. Distribution among the local units was found to be based on a variety of criteria, including population, area, vehicle registrations, valuation, tax collections, road mileage, and combinations of these factors. In some States these funds are distributed equally among the local governments.

It has been found that these methods of local road allocations often fail to reflect properly the needs of the highway system as a whole. Economic allocation of funds requires that money be spent according to the needs of traffic, expressed in terms of the lowest possible total cost of transportation, which includes not only road costs but vehicle operating costs. It is not merely total traffic which must be considered, but the concentration of this traffic. In determining priority for expenditure it should be remembered that because of the integration of traffic on several road systems, it is advisable to improve the primary system first since it carries the largest amount of concentrated traffic and its improvement brings about increased travel and increased receipts for the support of local roads.

It has been found that the spending of State funds by local governments is not always to best advantage because it is not properly controlled by the State. Many local units do not comprise sufficient taxable wealth and highway activities to qualify them as logical highway administrative agencies.

In the search for the proper scope for highway activities it is concluded that there may be a distinction between the highway administrative unit and the economic operating unit that the former may comprise several of the latter.

Operating units which do not have sufficient taxable wealth and traffic may require consolidation before they are able to perform their functions economically. Among other things there must be sufficient road work to allow efficient utilization of equipment, and sufficient appropriations to provide a competent engineering force.

Rural county highway units may comprise large areas for economic operations, while the urban county, because of its wealth, population, and traffic, may properly be confined to a small area. Because the urban county is usually part of a larger metropolitan area containing other counties, provision is needed for correlated action, in highway planning and in fixing priorities for improvement programs.

Correction of the weaknesses of local highway administrative finance has been attempted by transfer of local roads to State control. In the past 6 years 21 States have taken over 172,000 miles of local roads, constituting a 64 percent

* Based on a Report prepared for the Committee by Wilfred Owen, Research Assistant, Highway Research Board

increase in State mileage during that period. Four States have eliminated all locally administered rural highways. These have shifted the road burden from land to motor vehicles and from local government to the State.

Although the road consolidation movement was precipitated by the recent economic depression as a means of relieving property of the road tax burden, it appears that the inherent failings of local governments have been underlying causes of the movement, for in 1936 ten States effected local road transfers to their State highway departments, a larger number than in any previous year.

It is felt that the policy of Federal-aid appropriations for secondary roads, as well as the trend toward highway planning, will in many cases accentuate the movement for State administration of rural roads.

Consideration of present and past methods of highway financial administration reveals slow progress toward a rational spending program. Demands for increased highway appropriations have in many cases diverted attention from the need for wiser spending of what we have and more efficient managing of what we spend. Design, construction and maintenance standards have kept reasonable pace with modern transport tempo, but policies of administration and finance remain essentially horse-drawn.

Highway tax distribution and the administrative difficulties involved have been examined with particular reference to local application of State funds for highway purposes. Last year more than a quarter of a billion dollars in State gasoline taxes and registration fees were set aside for roads and streets not on the State highway systems. This money was 25 percent of the total motor vehicle tax collections for 1936. The large part of highway user taxes so distributed is an index of the need for studying methods of allocating such funds to local governments, for establishing an economic basis for shared taxes and State aid, and for inquiring into the uses to which these funds are now applied, the degree of financial control retained by the States, and the fiscal and managerial pitfalls into which both State and local governments spend their way.

VEHICLE TAXES FOR LOCAL ROADS

That highway users should be charged in accordance with their utilization of

highway facilities is the generally accepted theory upon which the gasoline tax and registration fee are established. It appears to follow therefore that the distribution of such taxes to various parts of the highway system should reflect the relative traffic volumes which they carry.

In the period of rapid highway expansion which paralleled the growth of motor vehicle travel, the theory that those who used the roads should pay for them was generally conceded, but financial pressure created by the need for a new system of main roads made it neither possible nor desirable to adopt the corollary that funds should be spent with exact regard to their origin. With the progress of a primary system of highways which such concentrated finance made possible, however, there originated in both counties and municipalities a demand that some part of State tax collections be returned for local roads and streets. Today the wide range in relative proportions of funds made available to local governments suggests no more scientific consideration than the loudness of these demands. In 1936, 3 States returned more than half of their total highway user imposts to local units of government, 11 over one-third of such collections, and 5 States made no such allotments whatever. Local roads in one State received 24 million dollars from State taxes, while in each of 10 other States less than a million dollars were distributed for highways in local jurisdictions.

TAX DISTRIBUTION LAWS *

State laws governing the amount and basis of gasoline tax and registration fee distribution comprise a legal labyrinth which varies in complexity from State to State. Two considerations are involved: determination of the total which shall be distributed by the State, and the division of this sum among the various local units. The total share going to local roads is generally expressed as a percentage of collections, a specific part of each tax levied, or a predetermined flat sum. The allocation to each local unit may then be made according to the population, area, assessed valuation, road mileage, or on the basis of vehicle registrations or tax collections. In the case of the registration fee, however, shares are often retained by each separate local unit at the time of collection, either as a fixed amount per registration or a percentage of total receipts.

Although the total amount of motor vehicle taxes granted for local road purposes may have no relation to traffic needs originating on these systems, in a large number of States registration fees are allocated among the separate units with a regard for relative traffic potentialities. Thus Arizona counties retain 50 cents for each original registration, while in Alabama 20 percent of total receipts from this source are used in the counties where the taxpayers reside. In the case of the gasoline tax, however, not only does the original sum granted by the State have little bearing upon traffic volume and intensity, but also the allocations among individual local units are generally based upon formulas which are untenable. Alabama, for example, distributes 3 cents of a 6-cent tax equally among its 67 counties, while New York counties receive 20 percent of collections according to the road mileage of each county. In Tennessee one cent of the

gas tax is distributed to the counties equally, $\frac{1}{2}$ cent on county areas, and $\frac{1}{2}$ cent according to county populations.

When money is distributed equally among local road units which vary in size and stage of development, or on the basis of land areas and road mileage which bear no relation to traffic conditions, there is little chance that distribution will be economically justifiable. Only by chance will highway income be in reasonable balance with the demand for funds. Even population and assessed valuation may be poor indices of the proper share of taxes required by local governments for transport facilities. Questionable practices of tax allocation accordingly help to make possible such variations in road expenditures as found in North Carolina before the State assumed control of all rural roads. The annual road expenditure in one county was \$14 per mile, while in another it was \$688. Similar conditions were found in Iowa in 1933 by a study of the Brookings Institution, which revealed that if State funds were distributed on the basis of some defensible index such as traffic or vehicle registrations (instead of area) allotments would have been reduced considerably in 75 percent of the counties.

In general the conclusion may be drawn that present methods of State fund allocations to local roads and streets are no less heterogeneous and unscientific than are the rates and bases of the taxes through which these funds are raised.

ECONOMICS OF USER TAX DISTRIBUTION

The question of what share of State motor vehicle taxes should rightly be allocated to roads and streets other than on the primary system involves fundamental concepts of highway economics. The purpose of roadbuilding is to provide for adequate traffic facilities at the lowest possible cost, including both road costs

* Appendix Table A

and vehicle operating costs. In spending for the highway program, therefore, funds must be allocated to those parts of the transportation system where improvements will bring about the greatest reduction in total cost and the greatest utility in adequate service.

Since limited funds do not permit simultaneous betterment of all roads, the element of time is of great moment in an economic distribution of vehicle taxes. If funds were returned to local roads and streets in the amounts generated thereon, prior to adequate development of a system of main highways, the higher cost of transportation for the many vehicles on congested primary routes would far outbalance the reduction in operating costs on the local roads. Also, whereas two road systems may carry equal amounts of traffic, expressed in vehicle miles or gasoline tax receipts, yet the needs of either depend largely on the type and distribution of this travel—whether highway utilization has been intensive, as on heavily trafficked main roads, or extensive, as the dispersed use of a large network of local rural roads. It must also be known in what ratio heavy trucks and buses or pleasure vehicles have accounted for traffic volumes. Furthermore it is important to recognize the integration of motor travel on the various road systems, and the fact that it is the entire trip which must be made at lowest cost, as well as the entire motoring population which must be considered in the computation of total costs for the entire highway system.

The classification of the principal routes as revenue producers is sound in principle. So large a percentage of the actual use of these is recreational in character that the potential increase by reason of wholly adequate facilities should be self-evident. The competitive nature of recreational offerings is also evident. The highways must compete with other

classes of recreational inducements. In the business of attracting tourist traffic, route becomes competitive with route, region with region, and even State with State. The impact of the degree of adequacy of major highways has large effects upon both private and public income. The financial support for local road improvements depends to great extent upon the excess earning capacity of the main roads, which in turn is dependent upon the attraction of potential traffic resulting from the offering of satisfactory facilities.

Broader understanding of the purpose of a highway transportation system, viewed as an entity, will demonstrate the importance of such concepts as priority and intensity of use, rather than integrated vehicle mileage alone, as standards by which tax allocations must be measured and financial policies adopted.

TREND IN STATE TAX DISTRIBUTION

Of the total collections of State motor vehicle taxes in 1927, 73.1 percent were used for State highway purposes and 22.0 percent for local roads and streets. By 1936 the percentage of user taxes spent on State roads had decreased to 55.2 percent, while local road allocations increased slightly to 25.1 percent. During this 10-year period, however, total vehicle taxes increased 90 percent, so that the reduced State highway share still represented a 42 percent dollar increase, and the 3.1 percent rise in the local road allotment was an actual 115 percent dollar increase. These figures are shown in Table 1.

In 1927 vehicle funds available for highway purposes were 95.1 percent of the total, whereas last year only 80.3 percent of tax collections were used for highways. This increasing use of road funds for other purposes appears to have hit hardest the State highway systems,

though hidden and unreported diversions by local units of government make impossible any definite statement on this subject

There has been more widespread recognition in the past decade of the right of subordinate units of government to share in State taxes. For whereas 20 States distributed gasoline taxes to local roads and streets in 1927, in 1936 36 States made such allotments. Registration fees were used for local roads by 27 States in 1927 and by 32 States in 1936.

counties, towns and townships, incorporated cities and villages, and miscellaneous local divisions of government. In each State the size, type and number of such agencies in operation and the relation or lack of relation among them differ widely.

In 4 States all rural roads are administered by the State highway departments, while 26 States* have State and County organizations, 6 have State and township systems, and 12 have three systems—State, County, and Township. In

TABLE 1
DISTRIBUTION OF MOTOR VEHICLE TAXES FOR HIGHWAYS,
1927-1936*

Year	Total vehicle taxes collected	Amount for State highways	Percent	Amount for local roads and streets	Percent
1927	\$ 560,027,983	\$409,596,885	73.1	\$123,176,360	22.0
1936	1,057,995,000	583,616,000	55.2	265,496,000	25.1
Change 1927-1936	+90%	+42%	-17.9	+115%	+3.1

* Detailed tabulation appears in Appendix, Table B

CITY STREETS

Because funds allotted to counties in many States may be used within municipalities, and because such expenditures are not always reported separately, it has not been possible to determine accurately the amount of State money spent on city streets. Accordingly these sums have been included with local road apportionments, and expenditures on urban extensions of State systems have been included in State highway disbursements where it has been possible to segregate them from other local road and street funds. The best figure obtainable for State money spent on city streets is \$31,468,000, compiled by the U. S. Bureau of Public Roads for 1936. Eleven States report such expenditures.

ADMINISTRATIVE SET-UPS

Highway administrative agencies in the United States include the States,

in addition to these rural systems, all States contain municipal organizations which have charge of urban streets, and half the States have further independent or semi-independent divisions within the county, such as commissioners' districts and special assessment districts, both rural and urban.

In most States there is neither control by the State over the spending of funds allocated to lesser governmental units, nor is there cooperation between the State and local highway organizations. Where laws designate that the State shall approve county construction programs financed with the assistance of State funds such approval is not uniformly followed by adequate supervision of the actual work. Where counties are invited to seek the aid and advice of the State, in practice the results are far from reassuring.

* Including the State of Washington, although 2 of its counties still contain township units.

TREND TOWARD CENTRALIZED
ADMINISTRATION

At the close of 1930 there were 324,496 miles of highways under State control. By the end of 1936 State controlled mileage had increased to 533,144 miles, a 64.3 percent addition in 6 years. Such has been the progress of a movement toward centralized highway administration which began in North Carolina in 1931. By assuming control over the State's 46,800 miles of county roads, North Carolina was the first to consolidate its

TABLE 2*
TRANSFERS OF LOCAL MILEAGE TO THE STATE
HIGHWAY DEPARTMENTS

Year	Number of States	Mileage involved
1931	3	73,651
1932	1	37,028
1933	3	37,744
1934	5	7,190
1935	4	5,623
1936	10	10,696
Total	21†	171,932

* A detailed tabulation appears in the Appendix, Table C

† Several States effected more than one consolidation

entire rural highway system under the State highway department.

It was not long, however, before complete centralization was adopted in West Virginia, Virginia* and Delaware. In Maryland 20 out of 23 counties have turned over their roads for maintenance by the State, while a program of consolidation under way in Pennsylvania has resulted in State participation in the maintenance of 46,000 miles of township secondary roads. On January 1, 1938, a total of 2,574 miles of Pennsylvania roads in townships, boroughs and cities will be absorbed by the State. Popularity of the road consolidation program since

* Except 3 counties which have elected to retain control of local roads.

1931 may be judged by figures in Table 2, which show highway transfers to the State highway departments.

Twenty-six separate transfers have been made in the six-year period 1931-1936, involving 21 States and nearly 172,000 miles. Last year 10 States were involved in such transfers, or twice the number of any previous year.

Further consolidations have been effected among the lesser units of government in the assumption of township road responsibilities by county highway organizations. It is generally conceded that the township, which in most cases contains an area of 36 square miles or less, has no place in efficient highway administration, and in the past 7 years 4 States have done away with these ineffective highway administrative agencies and adopted a so-called county-unit form of highway organization. With this type of administration all roads within the county not a part of the State system are operated as a unit, with locally collected taxes in townships and districts being spent by the central county administration without regard to township or district lines. This county unit plan makes possible more economical use of road machinery, a broader tax basis, cooperation and planning, economy in maintenance operations, quantity purchasing, and necessitates the budgeting of funds and the keeping of cost records. When Michigan recently completed the transfer of 60,000 miles of township roads to county-unit control, 1,376 small administrative units were eliminated.

CAUSES OF CONSOLIDATIONS

The immediate cause leading to centralization of road administration in North Carolina appears to have been the public desire, accentuated by economic depression, to escape from county property tax levies. It was proposed that the State assume all future highway financial

requirements, with the aid of a one-cent increase in the State gasoline tax, except that the counties should continue payment for the servicing of highway obligations previously incurred. The shift of financial responsibility, then, was from property to motor vehicles and from local governments to the State.

This centralization plan, however, suggests something more than a temporary relief measure. For it is doubtful that the counties would have acceded to such surrender of autonomy had the past record of county highway administration proved efficient and economical. That such terms could not be applied to a majority of North Carolina counties was evident from the conditions which the State found upon taking over local road affairs. Instead of 67,000 miles of roads listed by the counties only 45,000 miles could be found, despite the fact that 2,590 miles had not been accounted for in the original figure. Maintenance varied from satisfactory standards to hopeless inadequacy, and maintenance records in many counties did not exist. Some counties were found oversupplied with machinery, others practically destitute, and in nearly all cases machines were either obsolete or badly in need of repair. Such causes as these, rather than temporary tax relief, are thought to have been fundamental in the trend toward State assumption of local roads. That the trend has not slackened with return to more normal economic conditions may have a bearing upon this point.

PROPERTY TAXES FOR ROADS

Whatever is to be said for or against State centralization of highways, the concomitant policy of relieving property of its share in supporting the highway does not conform with the generally accepted theory of highway economics—that costs should be paid in accordance with service rendered. The shifting of road ad-

ministration from local to State control involves no alteration in the principle that highways serve other functions than those directly relating to motor vehicles. In an equitable allocation of highway costs, rational payments for land service are rightly chargeable to the land which is served. Property levies are an essential part of highway income, and their elimination may not only discourage proper development of highway facilities, but may also constitute an unfair burden upon the motorist.

A second criticism of policy in connection with highway centralization concerns the tendency of the State to neglect its first responsibility of preserving the integrity of the primary road investment and of providing necessary extensions. A shift in administration does not relieve the State of obligations previously assumed, and the requirements of the main road system must be recognized prior to further tax allocations.

A large element of overriding the recommendations and warnings of the State highway departments has characterized the adoption of State policies throwing the cost burden of additional large mileages upon the incomes from user taxes available to the department and usually inadequate for the requirements of the existing major highway systems.

CRITICISM OF SMALL ADMINISTRATIVE UNITS

It is self-apparent that many small roadbuilding entities now in operation are outworn relics of the dependence of transportation upon the horse—that both the time and distance of travel upon which their limits were fashioned have been reduced to negligible importance. Administrative scope has expanded, and this fact must be recognized by eliminating the multiplicity of highway organizations of minor units of government which make impossible the operation of highways as

a coordinated system. A small unit is generally unable to afford proper engineering personnel, its staff may be subject to frequent changes because of elections, and in general undue emphasis is likely to be placed upon political rather than technical considerations. Short radii of operation make the use of modern road machinery uneconomical through excessive overhead and numerous duplications, while small purchases of supplies and materials impose penalties of higher unit prices. Variations among the jurisdictions in area, population, taxable valuation, road mileage, topography, climate, vehicles registered and traffic volumes may make possible the extension of road facilities beyond traffic requirements in one county, while a neighboring unit may be financially unable to provide the taxpayer with a lasting return for the money he pays for satisfactory highway services. Budgeting, accounting, debt control and planning are generally beyond the pale of local road administration, while lack of continuous maintenance, the use of force account methods, and incompetently controlled spending of funds collected outside the local jurisdiction are weaknesses generally in evidence.

VARIATIONS AMONG COUNTIES AND STATES

In most discussions relating to the merits or demerits of centralized government it is claimed on the one hand that the county is "too small" to effect a proper highway administration, and on the other that the State is "too large." Either statement implies that counties and States are essentially homogeneous, and that there exists a standard-size government unit most applicable to proper highway management. Yet neither counties nor States are homogeneous units. Counties may differ in area from the 25 square miles of Arlington County, Virginia, to San Bernardino's 20,175

square miles in California. This latter county is larger than the three States of New Jersey, Delaware and Maryland combined. In population variations are even more pronounced, Loving County, California, for example, having but 195 residents compared with 4 million persons living in Cook County, Illinois. As regards the States, the largest is 250 times the area of the smallest, while populations vary in the ratio of 138 to 1. Nine States have more than 100,000 miles of highways (Texas has over 200,000) while six have less than 15,000. The fact that a county may be larger than the State of Delaware, in which State centralization of highways is in effect, presents the possibility that the State may actually be "too small" and the county "too large."

Consideration of the county as a highway administrative unit must take into account the two different general types of county, the rural, and the urban. The rural county is often unadapted to the performance of highway functions because of the limitations of its resources and the lack of sufficient highway activity to permit large-scale operations, either intensive or extensive. The urban county which contains a large city and considerable traffic and population, however, is by reason of its wealth, responsibilities, and intensive road needs, a logical highway administrative unit. Such urban counties nevertheless are handicapped in their function of improving highways by the fact that they are usually part of a larger metropolitan area embracing more than one county, as well as lesser jurisdictions such as towns and villages. Definite legislation is accordingly needed for effectuating correlated action throughout the metropolitan district, both in planning the transportation system as a whole and in detail, and in fixing priorities for the improvement program. It is necessary, therefore, to distinguish between such counties, and

to recognize that to speak merely of the size of an administrative unit may be inconsequential, if not misleading

Since such special considerations must be taken into account, it seems obvious that no definite standard-size unit can be prescribed which will be universally absolute for highway administration. The intensity of highway needs varies, as well as the degree to which a region has been developed and the type of its development. Large agricultural regions might prove nearer the optimum unit for highway administration than large areas of concentrated industrial development. Physical characteristics such as topography and climate are important factors for consideration as well as possible sources of highway funds and probable necessary expenditures.

THE OPTIMUM SIZE OF HIGHWAY UNITS

Certain characteristics of local government mentioned are susceptible to correction, such as lack of planning, budgeting, and other administrative matters. It is claimed by the opponents of centralization that county government may be revived by effecting reform along these lines. But many criticisms against the local highway unit as an administrative body are functions of physical characteristics which are not susceptible to "reform." No matter how efficient its system of accounting nor how expert its highway commission, local government may still be limited to uneconomical operations unless it is able to raise sufficient funds to pay the highway bill and unless the scope of construction and maintenance requirements will allow fullest utilization of equipment, a proper distribution of overhead and the economical operation of a competent engineering organization.

The economist recognizes that a profitable industrial plant is limited in its physical equipment to an optimum unit

of operation that unwieldy production units cause economies of large-scale production to give way to dis-economies, and that particular circumstances may alter the optimum plant even in the case of similar products. On the other hand, horizontal combination of a number of optimum production units under centralized administration is entirely in keeping with economical operation. The so-called American trust is an example of such horizontal combines. In other words an industry may require technical decentralization and managerial centralization.

This principle of economics appears to be applicable to the provision of highway facilities, in which optimum highway operating units might be determined upon, and their management directed centrally. Such is the general plan adhered to in the division of State highway systems into engineering districts, and suggested in the relation existing between the Federal and State governments.

It does not appear unworkable that all rural roads in a State might be operated on a similar basis. Each State might contain several highway operating units varying as to optimum sizes in accordance with particular considerations. These districts might be a grouping of counties or other local jurisdictions into regional areas. In small States or States essentially agricultural the entire area might be determined the optimum, in which case consolidation of all roads in the State would be economically in order. Whatever the size and number of operating units, however, financial and planning administration might still be centered in the State.

The establishment of the State highway departments was recognition of the need of centralized administration in creating a primary system of roads, and in the spending of State vehicle taxes with wisdom and coordination for the best interests of the whole State. Local units of government on the other hand were

left to administer their individual highway affairs, which were truly local affairs financed by local money. With the State-wide extension of motor transport, however, all roads within a State developed into a network which it was necessary to view as a whole. Recognition of the wider influence of secondary roads was granted in the form of allocations of State money to local units of government which were not established to be expending agencies for such funds. Accordingly, the principle came to be tolerated that there should be centralization of certain highways in the State, financed by State funds, and decentralization of certain other roads, also financed with State taxes, in a multiplicity of lesser governmental units. There is basic conflict between these two policies. On the one hand it is accepted that the highways constitute a closely-knit system, on the other hand uncorrelated policies of finance develop them as a patchwork.

The chief objections to State control of all highways are for the most part political rather than economic. That is, there is general recognition of the possibilities of economy and coordination with control centered in the State highway department, but there is fear concerning the effect on local government which might result from eliminating local highway administration. Such action, it is asserted, would tend to discourage interest in other local governmental functions and eventually to bring about complete State centralization. This would be the first step, according to stock arguments, toward the destruction of self-government, individual initiative, and democracy.

The "fine-woven rhetorical expressions" advanced in behalf of local government, it is pointed out, must be tempered with the common-sense observation that highway transportation is not a function properly confined to imaginary and outmoded political boundaries

To claim that the preservation of democracy depends upon the maintenance of such a system has been construed by some as an argument for governmental waste and inefficiency, and to extol the small local unit as a "school for democracy" has been challenged on the grounds that accounting and engineering are so often omitted from its course of study. The statement has been made that if democracy can coexist with such philosophies of government there is little fear that it would perish from State financial administration of highways.

FACTORS SUPPORTING CENTRALIZATION TREND

A consideration of importance with regard to the future possibilities of centralized highway administration is the recently inaugurated Federal assistance for secondary road development. During the depression years secondary roads and urban streets were granted various emergency appropriations by the Federal Government for the prime purpose of furthering employment. In the present fiscal year, however, regular Federal aid grants of \$25,000,000 are available for secondary road improvement, to be matched by equal amounts of State funds. It is of significance that the State highway departments may employ the services of competent county highway organizations, acting under direction of the State, in the preparation of plans, surveys and specifications, and in the supervision of construction. Where laws limit the State highway department in the extent of mileage it can maintain, the State may draw up agreements with lesser governmental units which will attend to the maintenance of these secondary roads. No such agreement will be approved, however, if any road previously built with Federal funds and currently maintained by a county or lesser political unit is not being kept in satisfactory condition.

CENTRALIZATION AND PLANNING

A further development toward closer cooperation between State and county, and greater control by the State over local roads is the promising possibility of State-wide highway planning. Surveys now under way to provide the facts necessary for plans may be made the instrument for publicizing the inadequacies of small highway units, and for revealing to the taxpayer how much of his money supports obsolete governmental machinery instead of better roads. It is also hoped that State legislation may follow the findings of such surveys when questions of highway administrative reform arise.

Some of the immediate purposes of the State-wide planning surveys are

- 1 To define the mileage of roads within each State to be supported by public funds
- 2 To determine the use made of the parts of this system, hence the sources of necessary taxes and their proper distribution
- 3 To determine future construction requirements for extensions, improvements and replacements
- 4 To determine the priority of such construction projects
- 5 To estimate necessary maintenance operations
- 6 To estimate future highway income and to budget this sum according to estimated future financial requirements

These several purposes emphasize the need for control by a central agency to supersede uncoordinated plans which result from the operation of a large number of highway jurisdictions acting independently. In order that planning may be effective throughout the State there must be an administrative control with greater power than any of the separate minor units. Planning which is "State wide" cannot be attained by a number

of individual plans within the State, but only by a central plan which applies to an integrated system.

In review of the foregoing status and trends in State vehicle tax distribution for highways and in highway administrative procedure, a summary of the data is presented, followed by a list of conclusions and recommendations suggested by them.

A SUMMARY OF FACTS

1 Approximately one-fourth of all State motor vehicle taxes were distributed for local road and street purposes in 1936.

2 The share of State funds allocated to local roads and streets has increased only 31 percent in the last ten years, while the actual money so distributed shows a 115 percent dollar increase during the same period.

3 The State highway share of motor vehicle taxes has decreased more than 17 percent in 10 years, while the dollar allotment has increased 42 percent.

4 State funds are distributed to local units of government in widely varying amounts and without regard to traffic generated, five States making no allocations and one distributing more than 24 million dollars.

5 Methods of distribution among each separate local unit are generally untenable, being made in equal amounts or on the basis of area, population, road mileage, assessed valuation, vehicle registrations, tax collections, or a combination of two or three of these.

6 In most cases the States retain no control, or merely nominal control, over the spending of vehicle taxes used on local roads and streets.

7 Four States have consolidated all rural roads in the State highway departments, while 26 States have State and county organizations, 6 have State and township units, and 12 have three systems—State, county and township.

8 In the past 6 years 21 States have shifted 171,932 miles of local roads to State control, constituting a 64.3 percent increase in State mileage during that period

9 More States were involved in local road consolidations in 1936 than in any previous year

10 In the past 7 years 4 States have eliminated all township road units

11 The highway consolidation movement has shifted the highway tax from local to State government and from property to motor vehicles

CONCLUSIONS AND RECOMMENDATIONS

1 Allocation of State vehicle taxes to local roads and streets should be made with reference to both volume and intensity of traffic generated, but with consideration for the priority of primary road requirements so that transportation facilities for the integrated system may be adequate and at lowest total cost

2 The State should maintain adequate control over all projects on which State money is used

3 Arbitrary political boundaries have no relation to functions of highway transport

4 A highway operating unit may be limited in its ability to function economically by reason of certain characteristics inherent in small-scale operations

5 A highway administrative area is not necessarily limited to the optimum unit determined upon for construction and maintenance operations, and should embrace sufficient area to permit quantity purchasing, specialized personnel, and a coordinated highway program

6 With the transfer of local roads to State control, benefits to land remain a legitimate highway service which should be recognized by property contributions to the highway fund

7 It is important that the State should provide first for all primary road obligations before assuming added burdens in connection with local roads

8 Federal aid for secondary roads is recognition of the fact that such parts of the highway system give more than local service. This new Federal policy promises to create closer cooperation between States and local units

9 State-wide planning surveys constitute the first wholesale attempt to bring before the public and legislative bodies facts concerning the need for sane financial and administrative policies

10 State-wide plans cannot be successful without a central planning authority

11 The failure of any State to provide a major system of highways not only adequate but attractive to the rapidly growing tourist and recreational traffic results in large losses of potential income to the public from the user taxes and to private business relying upon the highway travel

12 The failure to establish and to follow sound principles of financial administration is a serious cause of lack of progress toward adequate major highways where this condition exists

13. The waste of highway funds by duplicate local units and the uneconomical operations they necessitate brands financial administration the least progressive field of highway transportation

APPENDIX

TABLE A*

LEGAL PROVISIONS REGULATING THE USE OF STATE MOTOR VEHICLE FUNDS FOR LOCAL ROADS AND STREETS

1—Gasoline Taxes

State	Tax rate (Cents)	Distribution to local roads and city streets
Alabama	6	3 cents to counties, distributed equally
Arizona	5	$\frac{3}{10}$ to counties, according to gasoline sales in each
Arkansas	6 5	7 7 percent to counties, on basis of population, registration and area
California	3	$\frac{1}{2}$ to counties \$5,000 for each county and county-city, four times per year Balance distributed according to registrations
Colorado	4	27 percent to counties, 3 percent for extensions of State system in cities, towns and counties, on basis of State mileage in counties
Connecticut	3	
Delaware	4	
Florida	7	3 cents to counties, distributed among them by particular statutes
Georgia	6	1 cent to counties on basis of State-aid mileage in each
Idaho	5	
Illinois	5	$\frac{1}{3}$ to counties, $\frac{1}{3}$ to municipalities, on basis of vehicles registered
Indiana	4	40 percent to counties, 10 percent to cities, according to population
Iowa	3	$\frac{1}{4}$ to counties, by area
Kansas	3	
Kentucky	5	
Louisiana	5	
Maine	4	To general highway fund, with registration fees, from which \$150,000 goes to town roads, \$700,000 to 3rd class roads, on mileage basis, and \$1,000,000 to State-aid roads according to town valuation
Maryland	4	1 05 cents to counties, by mileage of county roads, 1 15 cents to Baltimore city
Massachusetts	3	
Michigan	3	To State highway fund, with registration fees, from which \$6,000,000 goes to counties, $\frac{7}{8}$ in proportion to fees collected, $\frac{1}{8}$ equally
Minnesota	3	$\frac{1}{3}$ to counties, based on mileage and traffic needs
Mississippi	6	2 $\frac{1}{2}$ cents to counties, on basis of population, registrations and area
Missouri	2	
Montana	5	
Nebraska	4	$\frac{3}{8}$ to counties
Nevada	4	
New Hampshire	4	Small amount to some local roads (less than 9 percent of total in 1936)
New Jersey	3	\$5,000,000 to city streets
New Mexico	5	
New York	3	5 percent to New York City, 20 percent to counties, by mileage
North Carolina	6	
North Dakota	3	$\frac{1}{3}$ to counties on basis of registration fees collected
Ohio	4	3 cents, minus about \$285,000 to counties, villages and townships on basis of vehicles registered
Oklahoma	4	$\frac{1}{4}$ to counties, according to population and area
Oregon	5	
Pennsylvania	4	$\frac{1}{2}$ cent to counties, based on gas tax returns during preceding 3 years
Rhode Island	2	
South Carolina	6	1 cent to counties, based on registrations
South Dakota	4	

* Data incomplete

TABLE A—Continued

State	Tax rate (Cents)	Distribution to local roads and city streets
Tennessee	7	To counties 1 cent equally, $\frac{1}{2}$ cent by population, and $\frac{1}{2}$ cent by area
Texas	4	
Utah	4	
Vermont	4	\$500,000 to local roads, by mileage
Virginia	5	\$239,000 in 1936 for the 3 counties not under State control
Washington	5	3 cents to counties and cities, according to gas sales
West Virginia	4	
Wisconsin	4	
Wyoming	4	25 percent to counties, based 30 percent on area, 30 percent on rural population, and 40 percent on assessed valuation

TABLE A—Continued
2—Registration Fees

State	Distribution to local roads and city streets
Alabama	20 percent to incorporated municipality or county where owner resides.
Arizona	50 cents of original fee retained by county.
Arkansas	
California	Approximately 30 percent to counties in proportion to registrations.
Colorado	50 percent to counties in proportion to collections.
Connecticut	
Delaware	
Florida	
Georgia	
Idaho	90 percent retained by counties.
Illinois	
Indiana	$\frac{1}{4}$ to counties and cities; counties, $\frac{7}{8}$ on mileage, $\frac{1}{8}$ on population; cities, on basis of population.
Iowa	
Kansas	10 cents of each registration to county.
Kentucky	
Louisiana	
Maine	
Maryland	After debt service and operating expenses of motor vehicle department, traffic court, etc., 30 percent to Baltimore.
Massachusetts	
Michigan	See gas tax data.
Minnesota	
Mississippi	All to counties where collected.
Missouri	
Montana	All to counties where collected
Nebraska	5 cents retained by counties for each original registration.
Nevada	
New Hampshire	Small sum for State-aid (\$272,000 in 1936).
New Jersey	Carrier taxes to municipalities.
New Mexico	15 percent to counties in proportion to registrations.
New York	25 percent to counties.
North Carolina	
North Dakota	
Ohio	47 percent to counties where car registered.
Oklahoma	9 percent to cities, 51 percent to counties.
Oregon	
Pennsylvania	
Rhode Island	
South Carolina	
South Dakota	76.5 percent to counties where collected.
Tennessee	
Texas	100 percent to county where collected, up to \$50,000; 50 percent up to \$175,000.
Utah	
Vermont	
Virginia	
Washington	
West Virginia	
Wisconsin	20 percent retained by town, village and city; also \$3,000,000 to counties for State-aid roads, 40 percent on basis of registrations and 60 percent by mileage.
Wyoming	County registration fees retained.

TABLE B
DISPOSITION OF STATE MOTOR-VEHICLE RECEIPTS
To State Highways and Local Roads and Streets 1927-36

1—Registration Fees

	Total funds distributed	For State highway purposes	Percent	For local roads and streets	Percent	Total fund to State highways, local roads and streets	Percent
1927..	\$ 301,061,132	\$ 220,645,359	73.3	\$ 61,543,245	20.4	\$ 282,188,604	93.7
1928..	322,630,025	235,142,906	72.9	66,569,311	20.6	301,712,217	93.5
1929..	347,843,543	250,704,624	72.1	73,226,339	21.1	323,930,963	93.2
1930..	355,704,860	253,013,603	71.1	74,639,463	21.7	327,653,066	92.8
1931..	344,337,654	234,593,379	68.1	79,388,101	23.1	313,981,480	91.2
1932..	324,273,510	188,539,140	58.1	83,298,207	25.7	271,837,347	83.8
1933..	301,315,447	157,754,844	52.4	75,943,682	25.2	233,698,526	77.6
1934..	318,576,965	175,382,722	55.1	84,356,966	26.5	259,739,688	81.6
1935..	324,855,135	173,477,594	53.4	87,587,250	27.0	261,064,844	80.4
1936..	374,921,000	194,491,000	51.9	98,241,000	26.2	292,732,000	78.1
Total	\$3,315,519,271	\$2,083,745,171	62.8	\$ 784,793,564	23.7	\$2,868,538,735	86.5

2—Gasoline Taxes

1927..	\$ 258,966,851	\$ 188,951,526	72.9	\$ 61,633,115	23.8	\$ 250,584,641	96.7
1928..	305,233,842	225,315,715	73.8	68,562,491	22.4	293,878,206	96.2
1929..	431,636,454	318,087,598	73.7	101,961,887	23.6	420,049,485	97.3
1930..	494,683,410	359,797,465	72.7	118,247,702	23.9	478,045,167	96.6
1931..	537,589,717	381,711,610	71.0	134,318,053	25.0	516,029,663	96.0
1932..	514,138,900	336,144,197	65.4	127,220,400	24.7	463,364,597	90.1
1933..	519,403,450	314,432,266	60.5	153,777,094	29.6	468,209,360	90.1
1934..	565,139,596	333,196,930	59.0	138,338,782	22.5	471,535,712	81.5
1935..	615,580,975	348,651,966	56.6	150,546,567	24.5	499,198,533	81.1
1936..	683,074,000	389,125,000	57.0	167,255,000	24.5	556,380,000	81.5
Total	\$4,925,447,195	\$3,195,414,273	64.9	\$1,221,861,091	24.8	\$4,417,275,364	89.7

3—Total Motor Vehicle Taxes

1927..	\$ 560,027,983	\$ 409,596,885	73.1	\$ 123,176,360	22.0	\$ 542,773,245	95.1
1928..	627,863,867	460,458,621	73.3	135,131,802	21.5	595,590,423	94.8
1929..	779,479,997	568,792,222	73.0	175,188,226	22.5	743,980,448	95.5
1930..	850,388,270	612,811,068	72.1	192,887,165	22.7	805,698,233	94.8
1931..	881,927,371	616,304,989	69.9	213,706,154	24.2	830,011,143	94.1
1932..	838,412,410	524,683,337	62.6	210,518,607	25.1	735,201,944	87.7
1933..	820,718,897	472,187,110	57.5	229,720,776	28.0	701,907,886	85.5
1934..	883,716,561	508,579,652	57.5	222,695,748	25.2	731,275,400	82.7
1935..	940,436,110	522,129,560	55.5	238,133,817	25.3	760,263,377	80.8
1936..	1,057,995,000	583,616,000	55.2	265,496,000	25.1	849,112,000	80.3
Total	\$8,240,966,466	\$5,279,159,444	64.1	\$2,006,654,655	24.3	\$7,285,814,099	88.4

TABLE C
ROAD CONSOLIDATIONS

Year	State	Local road mileage transferred to State
1931	North Carolina	46,826
	Pennsylvania	20,167
	Louisiana	6,658
	Total	73,651
1932	Virginia	37,028
	Total	37,028
1933	West Virginia	29,098
	Oregon	2,046
	California	6,600
	Total	37,744
1934	Minnesota	4,356
	Missouri	937
	Georgia	367
	Indiana	871
	Kentucky	659
Total	7,190	
1935	Delaware	2,602
	Nebraska	1,391
	Missouri	834
	Nevada	796
Total	5,623	
1936	Arizona	428
	Georgia	648
	Kentucky	340
	New Mexico	2,021
	Ohio	2,391
	Oklahoma	606
	South Carolina	419
	Texas	579
	Missouri	914
	Pennsylvania	2,350
Total	10,696	
Total Transfers, 1927-36		171,932