

HIGHWAY FINANCE PROBLEMS IN THE WEST

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SYNOPSIS

The highway finance problems in the 11 western states basically are similar to those in other regions. Nevertheless, some features of the western problems and development are of special interest. Although population has grown more rapidly in the Pacific coastal states than in the Nation as a whole, those states have continued to rely upon capital formation through highway user revenues. Sharply increased user rates have yielded substantially increased revenues. Gains in vehicle registrations and travel have augmented those revenues. Notwithstanding, dissatisfaction exists, particularly in California, with the rate or progress in the second modernization of highways. More consideration is being given to supplementary bond financing, both to raise revenues sufficiently to match the gross investment necessary and to earmark more of the highway user funds for improvement of the routes of heaviest traffic. Toll roads are not popular in the West as the public has been receptive to higher user fees. The growth of truck traffic has emphasized the problem of improving the pricing process for highway services. The demand for highways of greater strength to facilitate efficient trucking has developed interest in research to determine the investment and maintenance costs of the highway services demanded by each class of vehicles. Some western states have tackled the problem through interim committees. Washington has attempted a relative use study by bringing the basic data developed by the Federal-State Highway Planning Survey of 1936 down to date. It is widely recognized that each State should bring its highway use information up to the current period, but the means are not at hand in most western states. Interest has developed in cooperative research on a regional basis to improve design standards, to ascertain more clearly the investment costs of special highway use, and to develop the basis for charging out the aggregate costs of highways more in accordance with the cost responsibility of each class of vehicles. Such a program has stimulated the interest of competitive agencies of transport for it promises greater long-run economy in highway transport. This problem emphasizes the pricing process and the need for applying economic principles of investment in the highway field.

The eleven western States, as other States, have faced three basic highway finance problems: (1) How to finance critical highway deficiencies owing to wartime lags in construction, economic growth, inflation, and the requirements of rapidly increasing traffic by heavy trucks and combinations; (2) how to distribute the financial burden equitably among the general and special beneficiaries; and (3) how to adjust the various highway user tax systems to the requirements of interstate and interregional transport. The western attack on those problems has interest because of the wide use of interim committees; the strides made toward meeting overall financial requirements; the progress achieved in ob-

taining a factual basis for motor vehicle tax apportionment; and the steps taken to work as a region in solving particularly vexing problems, such as incremental cost finding and interstate reciprocity.

Possibly the postwar highway finance problems were more acute in the western States, the Pacific States in particular, because the population increase exceeded that of most other parts of the country. But in a vast and sparsely populated area such as the West, transport is always a key to development. Great distances to markets have emphasized adequate and low-cost transportation. The recent rise of manufacturing further heightens that interest. The traditional urge for better

highways, thus stimulated, explains the considerable success achieved in financing post-war needs and the willingness to raise user fees to obtain the necessary capital. But as in other regions, the West, in its highway financing, must face the question of how much capital to devote to highways as compared to other modes of transport which are also indispensable.

FINANCING EXPANDED HIGHWAY NEEDS

The western States contributed to nationwide estimates of needed expenditures for the National System of Interstate Highways and all Federal-aid systems. For the 11 western States, the aggregate construction outlay needed for the interstate system was \$2.0 billion at 1948 prices; that for all Federal-aid systems, \$4.0 billion.¹

Seven western States have also established legislative or executive interim committees to estimate state highway needs under long-range programs. California, Oregon and Washington have acted upon comprehensive studies embracing all systems. These were made under legislative committees employing engineering consultants. Colorado, Idaho, Montana and Utah have more recently completed needs estimates under legislative or executive committees.² Recommendations for such committees failed in Nevada and Wyoming. However, their highway departments and those of Arizona and New Mexico prepared their own estimates. While difficult to add because of varying program periods and coverage of systems, a rough estimate gives a range between \$4.0 billion and \$7.2 billion of gross expenditures for the next 10 or 15 years in the 11 western States. This approaches the

¹ *Highway Needs of the National Defense*, H. Doc. No. 249, 81st Cong., 1st sess., 1949, Table 1, pp. 54-55; and *Preliminary Report of Special Subcommittee for Study of Highway Finance Problems*, American Association of State Highway Officials, Committee on Highway Finance, September 1949, Table 5B.

² See *Colorado's Highway Needs and Highway Financing*, Preliminary Report of the Highway Planning Committee, October 1950; *Idaho Highways*, a report made by the Public Administration Service, Chicago, Ill., for the Idaho Highway Study Committee, December 1949; and *A Montana Highway Program*, Report and Proposal of the Governor's Interim Highway Committee, Dec. 4, 1950.

\$7.0 billion gross capital formation by Class I railways of the United States in the 1940's.³

The western States generally have adhered to pay-as-you-go financing, but only California, Oregon and Washington have enacted financial programs tolerably adequate for their long-range needs.⁴ California in 1947 and Washington in 1949 substantially provided the additional funds required, by raising the motor fuels tax from 3 to 4½¢ and from 5 to 6½¢, respectively; and by increasing weight fees by varying amounts. The revenues from California's gross receipts tax upon motor carriers were also designated for highway purposes. Thus, California provided an additional \$70 million annually⁵; Washington, about \$16 million annually. Oregon raised the fuels tax from 5 to 6¢, the basic registration fee from \$5.00 to \$10.00, but under pressure from the long-distance truckers, reduced the weight-group mile taxes and partially substituted graduated fixed fees. The 1949 Oregon adjustment was provisional.⁶

The Intermountain States have yet to solve their financing problems. The needs found recently by the Colorado, Montana and Utah committees will be presented to the 1951 legislatures and the Idaho Legislature

³ *Study of Domestic Land and Water Transportation*, Hearings before the Subcommittee on Domestic Land and Water Transportation of the Senate Committee on Interstate and Foreign Commerce, 81st Cong., 2nd sess. S. Res. 50, 1950, pp. 40-41.

⁴ For their factual bases, see Bertram H. Lindman, *A Proposed System of Highway Financing for the State of California*, Nov. 14, 1946; and James C. Nelson, *Financing Washington's Highways, Roads and Streets*, Oct. 15, 1948, reports submitted to the Joint Fact-Finding Committee on Highways, Streets and Bridges of California and Washington, respectively.

⁵ Richard M. Zettel, *Financial Analysis of the Collier-Burns Highway Act of 1947*, prepared for the California Joint Fact-Finding Committee on Highways, Streets and Bridges, June 26, 1947; and *Report of the Subcommittee on Transportation of the Senate to the California Legislature*, 1949 Regular Session, Dec. 31, 1948, pp. 7-13.

⁶ The Legislative Highway Interim Committee was continued to complete the revenue task by 1951. Washington's Committee was continued to study the equity of user taxation upon different classes of vehicles.

may make another attempt. Nevertheless, several Intermountain States have acted to obtain greater highway revenues. New Mexico and Montana sold bonds to match expanded Federal aid under the 1944 Act, and in 1949 Montana enacted a graduated use tax for additional support of state highways. Both raised the motor fuel tax in 1949, Montana from 5 to 6¢ and New Mexico from 5 to 7¢. New Mexico earmarked the additional 2¢ for retirement of bonded debt and to bring about a pay-as-you-go policy. Idaho earlier raised her fuel tax from 5.1 to 6¢; Colorado, from 4 to 6¢; and Nevada, 4 to 4½¢ (not including 1¢ county gas tax). Arizona, Utah and Wyoming have not changed user rates since World War II.

Despite the success of the coastal states in pay-as-you-go financing, supplementary bond financing is drawing considerable support as a means of accelerating major highway improvements. In California, freeway facilities are demanded at a rate faster than they can be provided; in Washington, greater investment is sought for U. S. 99, U. S. 10 through Snoqualmie Pass, Columbia Basin roads and an additional bridge across the Columbia River.⁷ Initial plans for spanning the Puget Sound with toll bridges have been made. Toll roads, however, except for the Denver-Boulder one, have not been supported. Nevertheless, impatience has been growing over the waiting involved under complete reliance upon the pay-as-you-go plan. Paying interest to enjoy the benefits of improved highways earlier seems the least of two evils to many. Not much thought has been given to the effect of the Korean war upon highway programming, although the rising construction costs under the current wave of inflation has added new pressures for increased revenues.

⁷ Senator Randolph Collier, "Bonds—A Solution to the Highway Finance Problem?" *Western Construction News*, June 15, 1950, pp. 81-82. He recommends that the 1951 California Legislature direct an appropriate Committee to investigate credit financing for an additional \$1 billion highway program during the 1950's, emphasizing "major traffic arteries of extremely limited mileage". The Joint Fact-Finding Committee on Highways, Streets and Bridges of Washington has recommended to the 1951 Legislature enactment of a \$55,000,000-bond issue for the projects cited above.

DISTRIBUTION OF THE FINANCIAL BURDEN

The necessity of raising many additional millions of dollars for highways has given emphasis to the tax apportionment problem. Each State which met its postwar needs has raised user fees without close attention to equity considerations. Urgently needed highway construction could not wait for complex allocation studies. A heritage of equity problems has therefore accumulated. Although of secondary importance at the time, these problems have considerable long-run significance. Unless aggregate user fees adequate to pay all costs assignable to highway users are drawn appropriately from each class of motor vehicles, some branches of the industry will develop faster than can be justified economically, with adverse implications for other agencies of transport. If the true costs of special use of the highways is not found and assessed, highways may break up faster than critical needs can be satisfied with available revenues. Hence, highways may fall into a vicious poverty circle.

Washington's case will illustrate the legacy of equity problems. The 1948 finance study had to be done in a hurry. It accordingly was largely confined to estimation of revenues at all levels of government under existing user and other road taxes; comparison of anticipated revenues with estimated costs, by systems; and calculation of dependable sources of revenues. Only limited attention was given to the vehicle apportionment problem and less to the allocation as between landowners, the general public and highway users. The report, nevertheless, was completely endorsed by the Interim Committee and the main financing measures were adopted by the 1949 Legislature. Compromises were reached over truck fees, however, which insured further study of the fee question. Although the preliminary gross ton-mile apportionment was not refuted, the necessary use of existing data, some quite old, was stressed. Consequently, although bus fees were raised as recommended, more of the burden than that study or the later one verified was placed upon small trucks and trailers. This adjustment was preliminary, to be replaced in 1951 by one based upon recent facts and thorough study. But even before the new study could be completed, public pressure against the gross weight fees on small trucks

and trailers became so intense that the Special Session in July eliminated the \$5.00 fee for trailers up to 4,000 lb. gross weight and reduced by that amount the \$11.00 fee for trucks of that weight.

Revenue measures had to be enacted in Washington and other States without benefit of detailed information on the shares of the burden to be assigned land use, community service, and highway use. The tendency has been to place the whole or the major burden of additional revenues upon the highway users. Where, as in Washington, the revenue deficiency was largely for state highways and the counties had materially increased property taxes for local roads, considerable logic supported the decision to rely upon user taxes. However, that solution may leave highway users in the uncomfortable position of having contributed capital for both highways used regularly and those used little or not at all. Although a knotty problem to find what each general beneficiary group should pay and a still knottier one to adjust state and local tax and apportionment systems to give effect to such findings, pressure has developed for more work in the future along those lines.

Perhaps the most basic vehicle apportionment study undertaken in recent years is that just completed for the Washington Interim Committee. The background of *Taxing Washington's Motor Vehicles Equitably for Highway Services*³ has been sketched. Of particular interest here is the Washington experience in bringing up to date the Highway Planning Survey data for 1936, for any State seeking a factual basis for equitable fee structures will be faced with similar problems.

The data which the Highway Planning Survey had kept current, such as the tax and financial series after 1936, proved reasonably adequate. Except for not showing distribution of trucks and trailers by gross weight group, registration series were likewise sufficient. But data needed for measuring relative use of highway systems were seriously inadequate. Annual mileage and miles-per-gallon data for automobiles dated back to 1936; those for buses and miles-per-gallon data for trucks related to 1935. The Nationwide Truck and Bus Inventory of 1940-41 was the latest source of

vehicle-miles for trucks and trailers, but the data were not related to gross weight. Nor were the current Highway Planning Survey weight checks, which yielded average gross operating weights on rural highways. However, no weight data were available for automobiles, buses, taxicabs and intracity trucks.

Thus, it was necessary to inaugurate a large-scale statistical project for the second study. Since one objective was to review the preliminary gross ton-mile allocation and another was to provide basic use data for incremental cost and other allocations, the main effort sought 1949 data on average vehicle-miles, average miles per gallon, and average gross operating weights. Several procedures were used. During registration for 1950, all owners of motor vehicles were requested to report to the County Auditors the miles they operated their vehicles in Washington in 1949, the average miles per gallon, and information classifying the type of operation, whether intercity or city and whether of special industry type. By direct questionnaire to the taxicab, transit, and intercity bus operators, data required for determination of empty weights, by seating capacity, and load factors for passengers, baggage, mail and express were obtained. Special surveys of truck operations were also conducted, but because of the great numbers of firms and the diverse groupings in that field coverage could not be complete. However, much effort was exerted to check the data reported by all vehicles on the 1950 license applications with other sources. The 1949 monthly reports of operators of Diesel vehicles were tabulated. Those gave mileage inside and outside Washington, fuel consumption inside and outside Washington, and miles per gallon by individual units, by licensed gross weight. A questionnaire was used to obtain comparable miles-per-gallon data from users of Diesel-powered and gasoline-propelled trucks operating with the same combinations of power unit and trailer. Thus, the fuel consumption of Diesel and gasoline power units was accurately compared. The expanded weights surveys, contributing a June weight check for a different 8-hr. period than in the September one, and 20 instead of 10 stations for better geographical coverage yielded adequate average gross operating weights for rural trucks and trailers. But entirely new surveys were organized to weigh representative

³ A report submitted by James C. Nelson to the Joint Fact-Finding Committee on Highways, Streets and Bridges, Sept. 23, 1950.

samples of automobiles, transit and intercity buses, and intracity trucks and trailers.

It was with some hesitation that comprehensive fact-gathering of this sort was attempted. First, many challenged the idea that one could go to the owners of motor vehicles for accurate information of highway use and performance, although obviously there is no other primary source. Second, the difficulties of sampling and project size of the original planning surveys had not been forgotten. Third, the project required greater resources than were available to the Committee. Notwithstanding, the courage of youth and the splendid cooperation of the Departments of Highways and Licenses and the Public Service Commission made the statistical effort possible. Although the findings of fact will be subject to check for many years, it is believed that they were accurate on the whole.

In view of the size of the statistical undertaking and its direction on a part-time basis, it should not be surprising that the report had to be confined to a revision of the earlier ton-mile apportionment. Although incremental cost, space-occupancy and operating cost allocations could not be provided as alternative tests of what each class of motor vehicles should pay, the Washington Legislature now has adequate data on relative use. If it elects to finance studies on other allocation bases, the basic use data are at hand. Already several other western States are making use of those data in preparing their own tax suggestions for the 1951 sessions.

Some of the principal findings may be of interest. The 1950 study found that most classes of motor vehicles were paying equitably for highway services. All classes of gasoline-propelled trucks were found to pay ratably with passenger cars. This was also true of the farm trucks up to 20,000 lb. gross weight which pay gross weight fees only 50 percent of those assessed commercial trucks. Annual farm truck mileages were but 64 percent of those of other trucks on the average. The overpayments of light trucks and trailers (up to 12,000 lb.) were occasioned by the 1949 compromises mentioned previously. Taxicabs and small buses, too, were found to pay more than adequately. But if the gross ton-mile theory were strictly applied, heavy automobiles weighing two tons or more (gross weight) should pay more than other cars. The groups

paying too little, on the gross ton-mile basis, were the larger buses, Diesel buses, trucks and tractors, and trailers and semi-trailers. Diesel buses were found to obtain 60 to 70 percent more miles per gallon than comparable gasoline buses, but they pay no greater fuels tax or other user fees. Most Diesel trucks and tractors obtained at least 40 percent more miles per gallon, but the existing 25-percent additional gross weight fees were found not to bring their contribution up to par. Trailers and semi-trailers likewise were in arrears in gross ton-mile contributions, even after crediting them with 65 to 75 percent as much fuels consumption per mile as found for comparable solo trucks. Several of the findings confirmed those of the Highway Cost Commission, based on both incremental and gross ton-mile apportionments, in the mid-30's.

In short, the Washington study revealed that it is the high-mileage buses, trucks and trailers of large capacity that pay inadequately for highways. Those vehicles, including Diesel buses and trucks, are largely used by private and for-hire carriers using the highways regularly. Although basing fees on incremental costs might require somewhat lower contributions from those vehicles, either theory of apportionment should exact the same contributions from gasoline and Diesel units and from trucks and trailers of comparable size and weight when making the same use of the highways. How practically to exact sufficient fees from high-mileage vehicles without placing unjust burdens upon low-mileage vehicles is a question in most western States.

The report did not advocate a full ton-mile equalization, but rather taking steps in that direction while making studies on other apportionment bases. Although it is far from clear that a competent incremental cost apportionment in Washington would greatly differ in results from those of the study made, the pressure from the motor carriers against the ton-mile method is so great that it would be desirable to apply other tenable methods as well. Meanwhile, the gross inequities revealed by the gross ton-mile findings should be mitigated.

Any State which desires to check the equity of its highway user tax schedules will have to go through many of the steps taken in Washington. Her experience should be encouraging to effort to obtain basic highway use data for

all methods of apportionment through existing agencies. To the extent that studies in neighboring states might reveal that the data found in leading states are tolerably applicable elsewhere, much of the cost of duplicate collection could be avoided. But as pricing highways, like pricing of other services, must be continuous, it would be desirable for other States to re-do their 1936 surveys. Washington has pointed the way. Adequate time should be allowed for the finance studies accompanying the needs studies and for those designed to solve equity problems. Even so, beyond collection of basic data and working through ton-mile apportionments, the individual states work under severe handicaps.

REGIONAL COOPERATION IN HIGHWAY TAXATION

The Washington study made provisional applications of earlier incremental cost studies done in California, Oregon and Washington. A complete incremental study was not done because of the technical complexity of that method and the lack of engineering resources to carry it out. Information showing increments of investment and maintenance traceable to each class of motor vehicle is not available from current highway records. It is therefore idle to emphasize the defects of gross ton-mile apportionments and the superiorities of the incremental cost approach. States must price their highway services while waiting for engineering and accounting information necessary to more refined cost finding. Even when differential cost information becomes available, a large share of the costs will have to be apportioned because they are common. Meanwhile, user fees should be adjusted on some logical and objective basis. Nevertheless, arrangements for cost finding should be made.

In the West, it is becoming widely recognized that regional cooperation and effort, integrated with national programs, are essential to proceeding beyond the point reached in Washington. It is simply too expensive for each State to undertake alternative design studies, test road studies, and other investigations necessary for costing findings. But these things can be financed and done capably by groups of states operating in a unified way, with a competent technical staff, and adequate test studies in the field. Happily, such a movement is currently being discussed in

the West and by the Interregional Council on Highway Transportation, the group of eastern States sponsoring the Maryland Test Road which established a cooperative pattern for financing costly but needed experimental studies.

Through the Council of State Governments, a Western Interstate Committee on Highway Policy Problems was established about a year ago. A major item of business of this group of two legislators from each state has been consideration of a program of regional research into highway design and cost apportionment. At the Salt Lake City meeting in February 1950, a task force group was appointed to develop an outline of regional research and to ascertain the interest of highway officials in each of the western states. The resulting report was discussed at the San Francisco meeting of the Committee on July 7, at which time the Institute of Transportation and Traffic Engineering of the University of California was employed to draft a specific program, correlating state, regional and national projects. That program was considered at the Santa Fe meeting of the Committee on October 21. A program was adopted to seek legislative and Highway Department support of a western test road; State studies of highway needs, finance and use; and a regional correlation staff to aid the states in their individual studies and to plan a regional study of incremental costs.⁹

So far as better allocation of highway costs in the West is concerned, the nub of the matter is cooperative research on the highly technical and experimental phases of the subject. Highway transport is growing rapidly. Highways are proving inadequate and are breaking up. The increasing demand for strength in high-

⁹ See Minutes of Meeting of Western Interstate Committee on Highway Policy Problems, Salt Lake City, Feb. 17-18, 1950; Minutes of Second Meeting of Western Interstate Committee on Highway Policy Problems, San Francisco, July 7-8, 1950; Report of Subcommittee on Research to Western Interstate Committee on Highway Policy Problems on *Regional Research Activities*, Oct. 23, 1950; Minutes of Third Meeting of Western Interstate Committee on Highway Policy Problems, Santa Fe, Oct. 21, 1950; and *Résumé of Western Regional Conference of the Council of State Governments*, Santa Fe, Oct. 23-24, 1950.

ways adequate for heavier axle and gross weights and for features adequate for large vehicles in mixed traffic presents the states with concrete problems of design, cost allocation, and finance that must be solved. The true economy of modern trucks and combinations, and the controversy with the railroads, can never be solved until highway officials and legislatures know the specific costs being as-

sumed to provide the highways demanded. For until user fees are adjusted to return the specific costs of each vehicle's use as closely as possible, the market cannot do its job of allocating traffic among alternative agencies. Nor can the States treat the different user groups equitably or feel assured that they are doing a wholly economic job of agricultural and industrial development.

PARKING FACILITIES AS PUBLIC UTILITIES

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SYNOPSIS

There are cities in the United States where no significant effort toward the provision of off-street parking facilities is being made, because of differences of opinion between the public enterprisers and private enterprisers as to which one should do the job. This study of the possible application of the public utility concept to off-street parking facilities has been made in an attempt to resolve this dilemma.

Proponents of municipal action seek reasonable user rates, high standards of service, responsible management, and permanent locations and capacity appropriately related to the generators of parking demand. Advocates of the private provision of parking facilities seek profits and freedom from municipal competition. The public utility approach may contain the essential elements of a compromise that would be acceptable to both disputants.

The most important legal elements of a public utility may be summarized as follows:

(1) The enterprise must be "affected with a public interest." Property becomes clothed with a public interest when used in a manner to make it of public consequence and when it affects the community at large.

(2) The enterprise must involve a "public use." The public utility concept is involved if private property is devoted to such a use that the public generally, or that part of the public which has been served and has accepted the service, has the right to demand that the use or service shall be conducted with reasonable efficiency and for proper charges.

(3) The enterprise must involve "monopolistic characteristics." To qualify from this point of view, the activity must enjoy in a large measure an independence and freedom from business competition facilitated either by its acquirement of a monopolistic status or by the grant of a franchise or certificate from the State placing it in this position.

(4) Finally, the enterprise must bear an intimate connection with the processes of "transportation or distribution."

When measured in terms of these essential elements, it is amazing how easily off-street parking facilities seem to qualify as a public utility, assuming that it is appropriately identified by State legislative act. Yet public utility regulation

¹ Acknowledgment is made of assistance by George E. Long, formerly Administrative Assistant, Land Studies Section, Financial and Administrative Research Branch, Bureau of Public Roads.