

6. Innovative user sources are encouraged; these include both redefining certain existing taxes as user fees and dedicating them to highway use and the creation of new and expanded user charges;

7. Piggybacking onto state revenue instruments should be looked at carefully; and

8. Public relations work is sorely needed; local areas need to articulate the deterioration and condition of local roads and what that means in terms of both future governmental costs and road-user operating costs; these deficiencies must be shown to be sufficiently important to gain the support of the public and lawmakers.

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Principles of Highway Finance

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During its 60-year history, state highway funding has been guided by a set of principles. These are set forth for use by the general public, business, and industry in the evaluation of proposals to change highway funding plans. Also, because many state highway tax proposals include indexing schemes to keep tax revenues in pace with inflation, the eight indexed tax plans signed into law between 1977 and 1980 are examined for adherence to the principles of highway finance.

Many elements of society have encountered severe problems in meeting financial obligations. State highway agencies are no exception. Highway costs have risen sharply. Reduced travel and increased motor vehicle fuel efficiency have cut deeply into fuel-tax revenues. Governors and state legislatures have responded with tax increases, new taxes, and shifts in tax resources.

Highway users frequently are called on to supply highway finance proposals, some of which depart from long-standing practices. In order to develop and evaluate these proposals, it is helpful to remember seven basic principles of highway finance that have stood the test of time. A sound highway finance measure should

1. Assess highway needs clearly;
2. Incorporate funding levels that are adequate and affordable;
3. Involve the public (including business and the highway-user industry) in defining needs, funding levels, and taxes;
4. Provide funding levels that are predictable;
5. Provide for legislative review;
6. Maintain or establish an equitable tax structure; and
7. Be simple to administer and easy to understand.

Adherence to these principles will lead to highway programs that meet transportation needs of the general public, business, and industry. The principles have been followed successfully for 60 years, and they are as valid today as ever.

An indexed highway tax is one of the measures enacted in recent years to keep highway programs in step with inflation. In the final section of this paper, indexed highway taxes are evaluated for adherence to the finance principles. Some faults are found, the most important of which is that automatic changes in taxes caused by indexing may not be related to specific documented highway program needs.

BASIC PRINCIPLES

Assess Highway Needs Clearly

State highway funding plans must be based on up-to-date information and technically accurate evaluations of need.

Capital Program

The capital program—including rehabilitation of the existing highway system and construction of new highways to accommodate growth in population, motor vehicles, and travel—is the most expensive element of the highway program. It is therefore essential to develop this element of a program on a sound base. This calls for an engineering-needs analysis that identifies current and future deficiencies and estimates the cost to eliminate them. An engineering needs analysis should

1. Prepare and evaluate a statewide highway classification plan that is based on highway use and land development within the program period;
2. Apply accepted engineering design and performance standards to each highway class;
3. Assess highway and bridge conditions, characteristics, and performance;
4. Identify deficiencies and analyze improvement options; and
5. Determine improvement costs and priorities.

If state funds are to be provided for local road

programs, the needs assessment should include city, county, and town roads.

Standards used to identify highway deficiencies and to select improvement options are critically important to an effective highway-needs analysis. The standards enable officials to pinpoint mobility, safety, and structural deficiencies. The standards should also enable officials to identify potential cost-effective, environmentally acceptable improvements.

Other Program Needs

Although the capital program requires the largest share of state highway funds, money must also be reserved for other program categories such as maintenance and operations, highway safety, administration, and bond repayments. The future costs of these elements should also receive technically sound and realistic evaluation.

Incorporate Adequate and Affordable Funding Levels

Reversal of the trend of highway deterioration and keeping highway development in pace with growth should be prime objectives of state highway programs.

Most state highway programs face critical needs. The nation's highways have begun to decline after decades of improvement. It is essential that this trend be reversed, for, as in any industry, it is more economical in the long run to keep a facility in good operating condition than to put off needed repairs until much more expensive rehabilitation costs are required.

The rate of growth in population, motor vehicle registration, and travel is high in many parts of the United States. To accommodate this growth safely and efficiently, many state highways must be built or rebuilt.

The level of state highway program funding must also reflect the ability of motorists and the general public to pay the cost. The state legislature must decide the trade-off between adequacy and affordability based on sound technical information, including the benefits and consequences of various possible funding levels.

Involve the Public in Defining Needs, Funding Levels, and Taxes

Virtually all citizens use streets and roads or are otherwise affected by street and road conditions. An involved and well-informed public can help define highway needs, identify necessary action programs, and provide support for them. Conversely, the chances for positive action and public support are remote when the public is not involved.

State and metropolitan highway user groups will want to be involved in defining highway needs, goals, and funding. They can supply useful information and viewpoints because they represent a wide range of people, including interest groups directly affected by highway conditions and service. Because members of highway user groups pay a significant portion of highway taxes, they are concerned that these funds be used in the most effective manner. Furthermore, because they understand what is to be gained or lost, highway user groups are the best advocates of soundly conceived state highway programs and adequate yet affordable funding levels and taxes.

The general public's perception of competency is also an important element in generating public support. Highway agencies are considered competent when they are perceived as using tax resources effectively and responding to public needs.

Provide Predictable Funding Levels

Assured funding is essential to efficient administration of a state highway system. State highway construction and maintenance programs are complex and require more than 20 000 technical, clerical, and maintenance employees in some states.

State highway systems range up to 72 000 miles, and each mile must be kept in safe and efficient condition throughout the year.

In the largest states, as many as 500 projects may be under construction and 2000 in planning stages at a time. Many construction projects require several years from preliminary planning to completion. State highway administrators need assured funding during at least a five-year period to manage these large programs effectively.

Dedicated highway-user taxes, which provide 80 percent of state-collected highway program funds, are highly predictable revenue sources. Supplemented by stable general fund appropriations, a user-based tax plan that has revenues dedicated to the highway program has been the best and most common basis for assuring future highway funds.

Provide Legislative Review

State legislatures are responsible for setting highway program goals, providing adequate funds, and reviewing progress.

When conditions alter the amount of highway funds available or the purchasing power of highway funds, legislatures must reexamine funding objectives. In this era of rapid change, periodic legislative review is important, so that lawmakers may alter highway funding to meet established highway program objectives or alter objectives to fit funding realities.

Close legislative monitoring of highway funding was less necessary in the two decades before the 1970s. State highway funds increased then as motor vehicles, travel, and highway needs increased, mainly due to the fact that increased highway travel meant increased motor fuel consumption and motor fuel-tax revenues.

Inflation was a minor factor in highway construction and maintenance. Motor fuel was always available and at low cost. Motor fuel conservation was not a factor. When highway needs outpaced highway revenue, the legislature made small adjustments in motor fuel taxes, motor vehicle imposts, or general revenue appropriations.

But in the 1970s, three things happened to make closer monitoring and adjusting of highway revenue more important:

1. Inflation increased highway costs, which greatly reduced the effectiveness of highway revenues. Construction prices moved from annual increases of 3 or 4 percent in the 1960s to 6 and 7 percent in the early 1970s and to 17 percent by 1979.

2. The close relationship between travel, highway needs, fuel consumption, and motor fuel-tax revenues ceased due to fuel-conservation measures such as improved vehicle fuel efficiency. Although travel and highway needs have increased, fuel use and motor fuel-tax revenues have leveled off.

3. State highway program needs have mounted because state legislatures have been slow to react to less-than-anticipated highway revenues and reduced effectiveness of the revenues.

Continued monitoring of state highway program needs and adjusting of highway finance levels will remain important as long as high rates of inflation persist and highway travel needs grow. There is no

sure way to forecast inflation, but the National Transportation Policy Study Commission reported in 1979 that automobile and truck travel will increase by 80 percent and 142 percent, respectively, in the period 1975-2000. Increased travel demand has always led to increased highway program needs.

Maintain or Establish Equitable Tax Structure

In order to ensure fairness, highway tax proposals should be based on a thorough financial analysis of revenue sources.

A highway finance proposal that treats all taxpayers equitably will attract far greater support than a proposal that unfairly heaps tax burdens on one class of taxpayers to the benefit of others. Highway tax proposals should be able to pass several tests of fairness and balance.

First, user tax support and general fund tax support of the highway program should be balanced to reflect the relationship of benefits to motorists and benefits to the general economy of the state.

Second, tax revenues that result from motor vehicle ownership (such as registration fees) and tax revenues that result from highway use (such as motor fuel and motor carrier taxes) also should be balanced in accordance with their purposes. Motor vehicle taxes are a levy to support a basic highway system, regardless of use. Motor fuel taxes typify a levy to support costs associated with the amount of highway use.

And last, support should be balanced among the various classes of motor vehicles; the benefits received and the highway construction and maintenance costs incurred by each class should be considered.

Most state highway finance systems have balances acceptable to the majority of persons. State highway finance proposals should be evaluated to ensure that inequities will not be created.

Be Simple to Administer and Easy to Understand

Taxes paid by highway users in the form of pennies per gallon of motor fuel and motor vehicle registration fees have a long history in the United States. Each state is adept at collecting and administering these taxes and fees, which are well understood and accepted by the public. Proposals that would change established procedures or add new types of taxes should be examined carefully for their effect on the cost to both government and industry of collection and administration. And they should be examined for their ability to gain public understanding and acceptance.

For ease of administration and understanding, highway taxes should not be subjected to frequent change, certainly no more than once a year. Also to enhance understanding, all motor fuel taxes and motor vehicle registration fees should be clearly identified as taxes to be paid by highway users for support of their highway program.

INDEXED HIGHWAY TAXES

Three types of indexed tax measures have been adopted by eight state legislatures to keep state highway revenues in step with inflating highway costs. This section describes these measures and evaluates them in relation to the seven principles of highway finance.

Indexed Highway Taxes

The variable motor fuel tax, which changes the pennies-per-gallon tax rate periodically to equate

it (within prescribed limits) to a prescribed percentage of the wholesale or retail price of motor fuel, is the most widely used indexed highway tax measure. In 1977, Washington adopted a variable motor fuel tax. New Mexico enacted similar legislation in 1979, and Kentucky, Indiana, Massachusetts, and Nebraska did likewise in 1980.

The application of a state ad valorem sales tax to motor fuel is another type of indexed tax. Revenues change as the price of motor fuel changes. The District of Columbia and nine states--California, Georgia, Hawaii, Illinois, Indiana, Michigan, Mississippi, New York, and Virginia (northern counties only)--have ad valorem sales taxes on motor fuel. These taxes are in addition to the pennies-per-gallon motor fuel taxes. Georgia dedicates a portion of the ad valorem sales tax to the state highway program; the other states use it to increase either general revenues or revenues for nonhighway programs, such as transit.

A third type of indexing for highway purposes was adopted in 1977 in Texas, in which all money for highways comes from the general fund. There the legislature established a formula for annually adjusting general fund appropriations for highways according to variations in construction and maintenance cost indices.

Variable Motor Fuel Tax

The variable motor fuel tax has had six applications to date.

Washington

Effective July 1, 1977, the motor fuel-tax rate is reestablished semiannually at 21.5 percent of the computed weighted average retail price per gallon of motor fuel sold in Washington. The law specifies a tax floor of \$0.09/gal and a ceiling of \$0.12/gal. The maximum was reached January 1, 1979.

New Mexico

Effective July 1, 1979, the motor fuel-tax rate is reestablished annually based on a table that fixes the tax rate to the computed average wholesale price of motor fuel plus applicable federal tax. The law specifies a tax floor of \$0.07/gal and a ceiling of \$0.12/gal. The tax rate cannot increase by more than \$0.01/year. In addition, the law permits sale of severance tax bonds for highway improvements and dedicates 25 percent of motor vehicle titling taxes to the state road fund.

Kentucky

Effective July 1, 1980, the motor fuel-tax rate is reestablished quarterly at 9 percent of the computed weighted average per gallon wholesale tank wagon price of gasoline. The law specifies a \$1.00/gal floor and a \$1.50/gal ceiling for the computed average price of motor fuel. This is equivalent to a \$0.09/gal tax floor and a \$0.135/gal tax ceiling. The maximum average wholesale price change from fiscal year to fiscal year is 10 percent. In addition, the law establishes a 2 percent surtax on motor fuel sales to motor carriers of heavy equipment.

Indiana

Effective July 1, 1980, the license tax rate for motor fuel is to be reestablished semiannually at 8 percent of the computed weighted average retail price of gasoline. Maximum average weighted retail

price is \$1.50/gal for 1980, \$1.75/gal for 1981, and \$2.00/gal after 1981, which establishes maximum tax rates of \$0.12/gal, \$0.14/gal, and \$0.16/gal, respectively. A tax-rate floor is not specified. Also enacted was an increase in the vehicle registration fee of about 25 percent depending on the class of vehicle.

Massachusetts

Effective August 1, 1980, the motor fuel-tax rate is to be reestablished quarterly at 10 percent of the average wholesale price of motor fuel. No tax-rate floor or ceiling was enacted. The law lacks specificity, so the Massachusetts commissioner of revenue will suggest changes at the next session of the legislature.

Nebraska

Effective October 1, 1980, the motor fuel-tax rate is to include a surcharge of 2 percent of the average price the Nebraska state government pays for motor fuel computed on a pennies-per-gallon basis. The surcharge rate is to be effective through fiscal year 1981 and then is to be adjusted by the State Board of Equalization based on the additional state funds required to fund appropriation levels established by the legislature. In addition, the law establishes a \$0.01/gal increase in the motor fuel tax; the receipts are to be divided equally between cities and counties.

Evaluation of Indexed Highway Taxes

Indexed highway tax measures ought to be carefully evaluated prior to being enacted. Some fail to satisfy the reasons for their development. Typical problems are as follows:

1. Revenues do not relate to need,
2. Revenues are unpredictable,
3. Funding levels change without public or legislative review,
4. Tax structure is unbalanced, and
5. Tax rates are difficult to establish.

The most serious problem with indexed highway taxes is that they may automatically change tax levels without reference to specific documented highway needs.

When motor fuel taxes are indexed to the price of motor fuel, state highway programs are no longer related to needs but to prices of petroleum established by foreign governments.

In enacting indexed motor fuel-tax measures, state legislatures assume that motor fuel prices

change in direct proportion to the costs of the highway program. However, this has not been the case, particularly in 1980, when motor fuel prices were constant while highway program costs soared.

And there is no sure way to predict petroleum prices, especially with the instability that characterizes the world's petroleum supply. If highway taxes are indexed to unpredictable motor fuel prices, state highway administrators are unable to estimate future revenues. This difficulty is serious because motor fuel taxes produce two-thirds of highway revenues collected by the states.

With taxes tied to economic indices, the public and legislatures lose some control of highway program spending. Program justification is less necessary. Funding adequacy and tax affordability become irrelevant.

Another problem of indexed highway taxes is that they may be difficult to establish and understand. Taxes related to the price of motor fuel are difficult to establish because there is no agreed-upon average wholesale or retail price for the various types of motor fuel. Prices change daily and vary within each state. Depending on the law, distributors or dealers are required to submit records on price and sales volumes for each type of fuel so government officials can compute the prescribed average price per gallon needed to calculate the new tax rate. Distributors or dealers then must use the computed tax rate to calculate taxes due and the taxes to pass on to consumers. Added bookkeeping and confusion may result.

Indexed Motor Fuel-Tax Safeguards

To reduce problems, most indexed motor fuel-tax measures have incorporated safeguards. Establishing maximum and minimum limits for the tax rate provides some measure of legislative control of the tax and the highway program. Retaining the pennies-per-gallon tax basis ensures that the administrative burden of tax collection will not be enlarged. Limiting tax-rate changes to once a year will avoid confusion and keep the tax collection burden within reasonable bounds. Although none of the indexed highway tax measures calls for periodic legislative review, such a feature might help to ensure that revenues are related to needs and program objectives.

In summary, the above evaluation shows that indexed taxes are not a problem-free substitute for the traditional methods of highway finance, based on periodic assessment of highway needs and resources accompanied by legislative review, debate, and action.

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Abridgment

Transit Performance Measures and Local Objectives: State-Level Policy Considerations

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With increased involvement by the states in financing public transportation, the issue has arisen whether states should determine the standards by which

the quality of transit service is measured. Either the performance measures on which these standards are based can be used to define a minimum quality