

HOW TO PROVIDE THE ROADS FOR WHICH USERS ARE WILLING TO PAY

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The Federal highway program, approved by Congress in 1956, is the most recent major addition to the Federal budget. It is undoubtedly part of a trend toward a greater Federal share in the Government of this country. Merely to attribute something to a trend, however, is not to justify it, and the economics of this program, inaugurated at a time when the size of the Federal budget is already causing widespread concern, deserves a more careful examination than it has so far received. That there is a need for more roads is fairly clear, that the States and cities have not been fully able to satisfy this need may also be granted, but does it follow from this that the Federal Government should step in? And, if it does follow, is the present period of full employment and inflationary pressures the right one for starting a large new investment program? These are the questions which I will discuss, without pretending to provide final and definite answers. In order to provide an orderly analysis, I shall start with a few basic problems of highway economics; the Federal program will not be taken up until the end of the paper.

The commercial principle

The principle that expenditures for roads are to be paid for by road users is by now widely accepted. It is, perhaps, surprising that this should be so, for, in the area of public expenditures, the desire to get something for nothing has always been prominent. In fact, the acceptance of this principle should be attributed not so much to its theoretical merits (which are considerable), but to a compromise between two conflicting tendencies. On the one hand, road users are dependent on governments for the facilities they need, but, on the other hand, they have to defend themselves against the pressure to impose heavy indirect taxes on gasoline, automobiles, and such. The establishment of a link between expenditure on roads and taxation of road users has enabled the latter to obtain road facilities without disproportionate burdens. In the case of the States, in particular, this link has often taken the form of a special-purpose fund and, with the Highway Revenue Act of 1956, a similar device has been introduced into the Federal budget. Nevertheless, it cannot be said that the mere acceptance of what is sometimes called the commercial view of road expenditures has solved all problems. It is by no means clear that present arrangements lead to the building of those roads for which

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there is the greatest public demand, nor that they lead to the most efficient utilization of available roads; the present paper is devoted to an examination of those problems.

As already noted, the commercial principle of road finance really consists of two parts. The first part says that road taxation, taken over a long period of time, should not be less than road expenditure over the same period. The usual justification is based on considerations of equity between competing industries; because of the inherent ambiguity of the concept of equity, it is perhaps better to state this argument in terms of allocation of resources. The mere fact that subsidizing roads out of general taxes would be unpleasant for the railroads is not relevant from an allocative point of view, for it would be undesirable if the Government were to guarantee individual industries against the consequences of economic or technological changes. What is relevant is that such subsidization may make roads cheaper in the eyes of their users than they really are, and that, consequently, some transportation would be diverted to the highways even though, from the social point of view, it could be more cheaply performed by the railroads. From this point of view, therefore, it is not really important that the total cost of roads should be borne by their users, but rather that the charges for road use are arranged in such a manner that people can choose between alternative forms of transportation on the basis of their social cost. We shall see later to what extent it is satisfied by the existing system of user charges.

The second part of the commercial principle says that highway users should not pay more than the cost of the road they use. The allocative arguments just advanced are, of course, equally relevant here, but there is one special point to be noted. Excise taxes on various commodities have been in existence from times immemorial, and without any justification in terms of the benefits which the Government provides for the industries concerned. The temptation to obtain additional revenue from gasoline and automobiles has naturally been strong, for these commodities are consumed mostly by the wealthy and their consumption is not too sensitive to price increases. Most economists take a poor view of excise taxes; given the fact that they exist, however, there seems to be no reason for regarding gasoline and cars as less suitable objects of excise taxes than, for instance, tobacco, phonograph records, or transportation charges. Nevertheless, it will be convenient for the discussion that follows to ignore any contribution to general revenue which excise taxes on the paraphernalia of highway use may produce.

One argument sometimes raised against the commercial principle deserves to be mentioned. It is held that roads produce so many indirect benefits, such as cheaper transportation, better accessibility of schools, availability of postal services, contribution to the defense needs, etc., that they should be subsidized on that ground. This argument is unsound, because it could equally well be applied to all other industries. Few economic needs could be satisfied, for instance, if there were no steel, yet this can hardly be considered an argument for subsidizing the steel industry. It is true that roads are a peculiar industry, but their peculiarity does not lie in the production of indirect benefits. Any contribution which they may make to the defense or to the post office should be charged to those departments, and not to

highways as such. The only important exception to the commercial principle arises when highways are constructed for purposes of unemployment relief. The unemployment compensation saved may then rightly be regarded as a subsidy to road construction from general revenue.

For the present purpose, the above brief remarks in favor of the commercial principle have to suffice. From now on, I shall take it for granted road finance is to be arranged in such a manner that the costs of roads are charged to their users with a view to attaining an optimal provision and utilization of roads. The next question concerns the extent to which such an arrangement is administratively feasible.

Methods of highway finance

The commercial principle would be substantially satisfied if roads were operated by private enterprise. For various reasons, to be discussed in a moment, this solution is now unthinkable, but, in the early 19th century, it did, in effect, prevail. The more important roads were then built and operated by turnpike companies, though not without some intervention from the Federal Government. These roads were financed by tolls. The advent of railroads gradually brought an end to the turnpike companies, and the roads were taken over by the State and local governments, which often continued to levy tolls. When automobiles became important, however, the tolls gradually disappeared. On highways, they did not reappear until the late 1930's, but, for the financing of bridges and tunnels, they were never entirely abandoned. After the Second World War, the toll-road movement spread rapidly, and it is only just recently that it seems to have weakened again. Because of their close connection to the commercial principle, a further analysis of toll roads may be useful.

The principal difficulty with toll roads has always been the relatively high cost of collection. By "cost" is meant not only the expense to the operator of the road, but also the time lost and the annoyance of road users. It is true that on modern toll roads both kinds of costs are quite small, but this is only so because these roads have a very heavy volume of traffic and because the number of access points is limited. On city streets, and on moderately traveled rural highways, the cost of collection would clearly be prohibitive. The levying of tolls on major bridges and tunnels is only feasible because access to such facilities is naturally restricted. Tolls, therefore, do not provide a general solution to the problem of road finance. Many people have inferred from this that tolls should not be used on road facilities at all, but this conclusion is unwarranted. When properly applied, tolls are a very valuable, even if minor, component of the system of highway-user charges. Before considering what constitutes a proper application of tolls, however, we must look at other methods of financing highways.

Apart from tolls, highways and streets are mainly financed from property taxes, taxes on vehicles (such as license fees and excise taxes on automobiles and parts), and taxes on the use of vehicles, more particularly the excise tax on gasoline. Property taxes, which are mainly of importance for the finance of city streets and minor rural roads, are not usually counted among highway-user charges; since their economic basis lies, however, in the increased value of property due to the

accessibility provided by roads, they are closely akin to user charges. Property taxes are eminently suitable for the financing of access roads, even though there may be only an indirect link between the value and the highway or streets that give access to it. They are much less suitable for the financing of through roads, which often have a harmful effect on the value of adjoining property, and whose benefits for other property may be too indirect to appeal to the imagination of voters. When automobile traffic developed and tolls went out of existence, other sources of finance for major roads, therefore, had to be found. Taxes on vehicles and on the use of vehicles proved to be the answer to this need, though it should be added that, in the case of the Federal excise taxes on gasoline and on automobiles, there was no formal connection with highway construction until 1956.

With the aid of revenues from gasoline taxes and license fees, an enormous mileage of roads has been constructed or improved. Whether the roads so provided were always those which were most necessary is another matter, however. The emphasis has been on rural roads, while in the cities, both large and small, the inadequacy of roads was and is a much more serious problem. Yet in terms of vehicle miles urban traffic is about as important as rural traffic. This comparative neglect of urban traffic congestion can, however, not necessarily be interpreted as a misallocation of resources, because the cost of road construction and improvement is so much higher in cities than in the country. It does, nevertheless, raise a fundamental question: What is the basis for the decision to build certain roads and not to build others?

Which roads are to be built?

In the old and lamented days of private toll roads, the decision which roads to build was made by the ordinary standards of private enterprise. The turnpike operators had to decide for which roads there would be sufficient demand, for if traffic proved to be insufficient, they would go bankrupt and, if the traffic was more than expected competition, at least ideally, would satisfy the excess demand. Under that system, a close adjustment of supply to demand was therefore possible, though the high cost of collection was an impediment. The financing of local roads by means of property taxes also leads to a fairly good adjustment for that particular type of road, because residents will vote for the roads they need and against those which they do not need.

With indirect types of taxation, such as license fees and gasoline taxes, the problem becomes more difficult. The mere equality of expenditure on roads and receipts from user charges does not provide definite criteria for selection of roads to be built. In principle, the voters retain control, but this control is only of a very general nature. The States, which are now the principal agents of road construction, will not go bankrupt if they build roads whose cost exceeds the contribution made by their users provided they also build other roads where the contributions exceed the cost or can draw upon general revenue. There is consequently no direct test whether the roads actually built are those that are most necessary.

It is true that the States, by means of traffic surveys and similar methods, have tried to meet the needs of traffic as best as possible, but traffic forecasting is a difficult art, and the techniques followed, though

often ingenious, do not always inspire complete confidence. Thus there is no agreement among experts as to the valuation of time saved by road users on better roads; yet there can be little doubt that time-saving is the most important criterion by which to compare alternative road projects. The result is that, in a desire to be conservative in their estimates, engineers tend to use a much lower value for time than would seem to be economically justified. A typical figure used in planning calculations is \$1 per car per hour, whereas the willingness of drivers to pay relatively high tolls for faster travel suggests that \$4 or \$5 would be more realistic. Hence, it would seem that current methods of traffic planning do not put sufficient emphasis on time-saving; this might mean, for instance, that the construction of a bypass around a congested city is rejected because it would add too much to travel mileage, while in fact users would consider the saving in time more important than the additional mileage. However this may be, a thorough investigation of current traffic forecasting procedures, based mainly on a comparison of anticipated and actual traffic volumes on existing roads, should have high priority in highway research. New devices for forecasting traffic are continually being proposed, but attempts to test the validity of existing methods are hard to find. A study of this kind might cost as much as quarter of a mile of new roads, and would probably produce greater benefits in the long run.

The difficulty of estimating traffic needs is not the only objection to current highway planning. Further problems arise from the predominance of State governments in this area. The State is not necessarily the best planning unit; for the some purposes it is too small, for others it is too large. If the cost of every single road were paid for by the traffic that uses it, as is the case with contemporary toll roads, the size of the planning unit would be a question of minor importance. When revenue from several roads is pooled, however, and the tie between cost and traffic is loosened, the problem becomes more acute. A difficulty arises, in the first place, from out-of-State traffic. A State may be reluctant to build a road on which much of the traffic comes from other States, because it may not be able to collect sufficient gasoline tax revenue from this traffic. With truck traffic this difficulty is sometimes overcome by special levies, but this is less practicable in the case of passenger cars. If there were interstate highway authorities, the difficulty could be largely resolved; as it is, out-of-State traffic provides one of the main arguments for toll roads and Federal intervention.

The problem of city traffic

The opposite case, where the State is too large as a planning unit, arises particularly in the case of city traffic, already referred to above. In principle, the States are concerned with through traffic rather than local traffic, though in practice this principle is sometimes interpreted generously. Even so, State aid to city traffic is probably inadequate. It seems significant, for instance, that since 1941 (the earliest year for which adequate statistics are available), urban travel in terms of vehicle-miles has risen much less than rural traffic, even though the population living in urban areas has increased much more than that living in rural areas. An important aspect of this problem may well be that gasoline taxes are not a very suitable way of financing traffic

facilities in cities. The "stop and go" driving common in cities leads to a high gasoline consumption; if congestion were removed, gasoline consumption might therefore fall, instead of rise as is usual on rural roads. Improvements in city traffic could, therefore, be paid only by relatively high gasoline taxes, which might meet with rural opposition. City gasoline taxes or city license fees sometimes provide an answer, but the obstacle of out-of-area traffic is even more serious here than it is for the States.

Later on I will indicate why Federal assistance might be justified for urban traffic facilities. It should not be inferred from this, however, that the cities could not do more themselves to solve their problems. License fees and gasoline taxes certainly cannot provide the whole answer, but other possibilities are still open. In the first place, property taxes, the traditional means by which city streets have been financed, could be used to a greater extent for major urban roads than has been done so far. The value of all city property depends upon its accessibility, and there are already plenty of examples of cities whose centers are declining because people cannot go or park there. Higher property taxes would of course be unpopular, and an educational campaign might be necessary to overcome the shortsightedness which so often rules in those matters. Parking fees provide a further means of collecting the cost of urban traffic facilities from their users. When all costs of city streets are properly taken into account, it is evident that the parking rates now customary are much too low. Since nearly all the vehicles that enter the business districts will ultimately park there, parking fees need not be regarded merely as a device for rationing parking space. In fact, the difficulty of finding vacant parking space in most cities is a sufficient indication that, even for rationing purposes, the meter rates are not high enough. Unfortunately, a full discussion of urban traffic problems would require an analysis of much wider scope than can be undertaken in the present context; these brief remarks must therefore suffice.

Although gasoline taxes and license fees have made a very considerable contribution to the provision of more and better roads, the defects outlined earlier are at the root of the present crisis in road finance. For city traffic, an alternative partial solution has just been put forward. For rural traffic, there are two alternatives; namely, toll roads and Federal intervention, which I will take up in that order.

Modern toll roads

The revival of the toll-road movement since about 1940 must mainly be attributed to the reluctance of States to increase gasoline taxes, particularly to build roads which serve much out-of-State traffic, and to the unwillingness to exceed constitutional debt limits. It cannot be ascribed, as is sometimes done, to the technical characteristics of toll roads, for in some States toll-free roads have equally excellent characteristics. Most toll roads are operated by independent State agencies and are financed by revenue bonds, which are covered only by toll and concession receipts. The toll rates are typically between 1 and 2 cents per mile per passenger car; for trucks they are considerably higher. Expenses of collection and administration are typically around 5 percent of gross receipts, which is approximately the same proportion as for gasoline taxes and license fees. Net toll receipts are reserved for payments of interest and redemption on the

bonds originally issued to construct the toll; this is true even in those cases where the State has pledged its general revenues to bondholders. The users of toll roads are not exempt from ordinary taxes and license fees.

Though traffic experience on the toll roads has, on the whole, been fairly satisfactory, they have come in for considerable criticism. The early complaints about high accident rates are no longer heard, and most users seem to find the charges reasonable enough. Nevertheless many people, rightly or wrongly, still see an incongruity in the fact that facilities built by Government agencies are not available to everybody without further admission charges. I do not think this attitude deserves much sympathy; it is hardly consistent with economy in government.

Only slightly more respectable is the argument, relentlessly advanced by the United States Bureau of Public Roads, that toll revenue bonds are an expensive method of financing highways. Proponents of this idea argue that such bonds carry a higher rate of interest than those backed by the full credit of the States, but they fail to realize that this arrangement also takes the risk from the shoulders of the States. Thus the people of West Virginia struck a good bargain when, for an interest rate higher by a fraction of 1 percent, they induced bondholders to take over the risk of insufficient traffic. This risk has proved only too real, and the bonds are now at about half their par value. Comments previously made about the present state of the art of traffic forecasting are appropriate at this point. Now it might be objected that if the West Virginia Turnpike had been financed with the State's full backing no financial crisis would have arisen. In that case, however, the loss to the citizens of West Virginia, though less obvious, would have been equally real, for they would have paid gasoline taxes for a road which is not justified by traffic needs.

Although the argument about high rates of interest is, therefore, fallacious, there are nevertheless some arguments against financing by toll revenue bonds and against basing toll charges on the need to service those bonds to the full extent. Taking the last point first, it is clearly anomalous that toll-road users should pay not only for the roads they use, but also, through their gasoline and license fees, for the roads they do not use, and on which they consequently diminish congestion. From this point of view, it would seem that tolls from self-supporting turnpikes are normally too high. This means that the traffic on turnpikes is less than would be socially optimal, and that there is more traffic on parallel free roads than would be justified. It would, therefore, be better if turnpikes were subsidized by the State to the extent of gasoline taxes consumed by the vehicles that use them. Another solution, recently adopted in Massachusetts, is to give motorists refunds equivalent to the tax on the motor fuel they used on the turnpike.

In principle, however, there is nothing wrong with the idea of tolls as such. Toll roads may be regarded as offering premium travel, for which travelers may be expected to pay extra just as they do on airlines and railroads.

The conception, implicit in the above, that tolls are a means of enabling motorists to select the traffic facility which they prefer, does

not agree entirely with the usual view of tolls. The latter are commonly regarded not from an allocative, but from a purely financial point of view. Thus, tolls are normally based on the historical cost and not on the replacement cost of the facilities to which they apply, and it is commonly stipulated that when bonds have been redeemed, the facility shall become free. The absurdities to which this view can give rise may be illustrated from the example of the San Francisco-Oakland Bay Bridge. This gigantic structure was built during the depression at a relatively small cost. The toll is consequently only 25 cents for passenger cars and traffic is so heavy that serious congestion prevails during long periods of the day. Although only a fraction of the useful life of the bridge has been spent, the bonds have been nearly paid off. If the toll were to be removed, the congestion would undoubtedly become still worse. Plans for a second crossing have been approved, but construction costs have risen so much since the 1930's that the toll would have to be higher than the present rate, which would lead to underutilization of the second bridge, and is apparently also a major psychological obstacle in the minds of those concerned. These plans have therefore not yet been put into effect. At present, it would be more economical to discourage traffic on the old bridge by raising the toll, but it is perhaps too late for that, because the development of commuting from the East Bay to San Francisco, encouraged by the low tolls, has created powerful vested interests. If the tolls had been based on replacement cost rather than historical cost, these difficulties might never have arisen, and the second crossing would probably not be necessary.

The San Francisco-Oakland Bridge provides an example where historical cost-pricing leads to an unduly low toll rate. We need not go far to find an example where it leads to too high a toll. A few miles to the north is the San Raphael-Richmond Bridge, which was opened in 1956, and on which the passenger car toll is 75 cents for a shorter distance. Traffic has so far been much below the estimates on which the project was based. This may conceivably be no more than a temporary phenomenon since some types of traffic—particularly commuter traffic—may need several years to reach their normal volume. For the sake of argument let us assume, however, that traffic will continue to fall short of original expectations, as now seems probable. There can be no doubt that reducing the toll would go some way toward curing the situation, and it is even conceivable that at a lower toll rate, total receipts might be larger. This remedy has indeed been proposed, but it had to be rejected because the agreement under which the revenue bonds were issued fixed the toll rate at 75 cents. That these agreements contain provisions about minimum toll rates is in itself inevitable, since otherwise the States might be tempted to satisfy bondholders' interests in order to curry favor with the voters. Nevertheless, it is clear that if the traffic projections on which the road or bridge has been based turn out to be too optimistic, its historical cost, as indicated by the size of the bond issue, is quite irrelevant from an allocative point of view. After the road or bridge has been built, the only thing that really matters is that it is used to the fullest extent without creating an unnecessary demand for additional facilities.

Examples of the two kinds of anomaly noted can be easily multiplied and, as time goes on, more and more examples will no doubt

appear. Their principal implication is that toll revenue bonds are not a suitable means of financing highway facilities. We may illustrate this from the first-mentioned case, where the actual toll was too low; this is perhaps the more common case. If, as would be economically rational, the toll were raised, toll receipts would increase even more beyond what is necessary for servicing the bonds. The excess revenue cannot be paid out to bondholders, for their claim does not extend to anything beyond principal and interest. Under existing procedures, the only result of the higher toll would be that the bridge would become toll free even earlier than is the case already, and we have seen that this would be economically undesirable. The users of the bridge did not undertake to bear the risk of insufficient traffic; hence there is no reason why they should profit from greater traffic; the same argument applies to the State. Although a higher toll would therefore be economically desirable because it would improve traffic conditions on the bridge and would prevent the building of a possibly unnecessary second bridge, under the existing system there is no one who would be entitled to the additional revenue.

The statement of the difficulty at the same time suggests a solution. The problem is one of risk bearing, the risk being that of insufficient or excessive traffic. The institution which has been specifically created to bear risks on a large scale is the corporation. If toll roads or bridges were operated by corporations, the difficulty here outlined would disappear. Certain new problems would arise instead, and these we must now consider.

The first possibility that probably comes to mind is that these corporations should be privately owned. Unfortunately, this is difficult for two reasons. In the first place, particularly where highways are concerned, the private corporations would compete with toll-free roads provided by the government. Moreover, we have seen that a rational coordination of toll roads and free roads required that some gasoline tax funds be turned over to the toll road or refunded to its users. It is clear that, in the case of a private corporation, such transfers would cause major administrative problems. The second obstacle in the way of private corporations is the opposite of the first and is perhaps more likely to occur in the case of bridges or tunnels. If the toll facility has no competition from toll-free facilities, and does not require any gas tax funds, there will inevitably be a tendency to operate the facility as a monopoly. The problems raised thereby are similar to those encountered in public utilities, such as electricity or the railroads. In other words, government regulation would be necessary, and the advantages of private enterprise would be largely lost. Perhaps a better solution would be to have toll facilities operated by government corporations, of which there are several precedents in the Federal domain. There would be no reason why these Federal corporations should not sell stock to the public, but their charter would specifically require that they set tolls on the basis of replacement cost and the demand for traffic. Any gains or losses they might make in following this policy would accrue to, or be borne by, the shareholders. They would be entitled to such tax moneys as are necessary to maintain a proper traffic balance between toll roads and free roads.

The Federal highway program

A toll system modified in this manner might make an important contribution toward solving the present crisis in road finance. In

fact, however, another outlet seems to have been chosen. The Federal Government, which only until recently had a minor part in the planning and financing of road facilities, has now accepted a major responsibility, particularly with regard to the so-called interstate highway system. The Federal Government will now reimburse States for 90 percent of the cost of that system; for this purpose, it has reserved the full Federal excise tax on motor fuels, including the part which previously belonged to general revenue, and one-half of the yield of the Federal excise tax on motor vehicles and parts, which formerly went entirely into general revenue. Since this program implies a considerable addition to the Federal budget, the current concern over big government makes it particularly important to examine whether it is really necessary.

We observe, to begin with, that of the funds to be dedicated to Federal highway aid the major part, namely the gasoline tax receipts, is not different in nature from that levied already by the States. At first sight, it might seem therefore that the Federal Government is not doing anything which might not have been done by the States themselves. Indeed, one cannot help but suspect that the Federal program is attractive to the States mainly because the psychological burden has been removed from them, even though the total burden on taxpayers is exactly the same. If this suspicion is correct, the program, at least in part, would be an attempt to remove highway finance from the constant scrutiny of the taxpayers; such an attempt would hardly merit the sympathy of those interested in economy of government or in the autonomy of the States. If the voters in the separate States do not consider new roads sufficiently urgent to be willing to pay higher gasoline taxes for them, it is not clear what would be gained by forcing them to do so through Federal levies whose connection to particular expenditures is inevitably less direct. As Professor Arthur Smithies has pointed out in his authoritative work on the Federal budget, congressional budget procedures date back from a time when the Federal Government had a chronic surplus of revenue; consequently, Federal control may not be strict enough to prevent expenditures whose benefits fall short of the burden of the taxes by which they are financed.

There are, however, two additional arguments that have been advanced in favor of the Federal program. The first one concerns interstate traffic, of which we have already spoken previously. It is correct that the State gasoline taxes may fail to provide adequately for out-of-State traffic, but it is doubtful whether this justifies Federal gasoline taxes on a large scale. As far as truck traffic is concerned, the States already have means of charging out-of-State traffic. In those States where out-of-State traffic is really heavy, toll roads have provided a solution which could be further improved along the lines indicated above. Although adequate statistics are not easily available, it does not seem that in the other States interstate traffic is really sufficiently important to warrant Federal intervention, except in a few isolated instances. Few of the highways that form part of the so-called Interstate System are in fact used to a large extent by interstate traffic.

The second argument in favor of the present program relates to civil defense needs. In case of war it may be necessary to evacuate

most cities, and the capacity of the highways around many cities is not nearly large enough for this purpose. In fact, most urban traffic systems are already quite inadequate for peacetime traffic needs, and the States have probably not done enough to improve those systems, most State legislatures being dominated by rural elements. It would seem that if urban roads were brought up to the requirements of peacetime needs, they would also go far toward meeting civil defense needs; however, if security arguments have to be invoked in order to obtain something which can also be defended on less dramatic grounds, it would be churlish to criticize. Since, moreover, the financial problems of urban traffic facilities are so much more serious than those of rural facilities, a case could be made for Federal intervention.

A further argument for Federal highway aid, based on the different income levels of the different States, appears to be less sound. Whatever one thinks about equalization payments among States in general, it must be doubted whether better highways are among the principal needs of the poorer States. If it is felt that the latter need more Federal money, it would be better to let them decide for themselves for what purposes it is most urgently needed.

The upshot of our discussion of the Federal highway program is that, for urban traffic facilities, it has considerable justification, but that for rural facilities, there is a distinct danger of wasteful expenditures. The 90 percent-10 percent formula in itself is hardly likely to lead to a careful evaluation of projects on the part of the States. The most important thing is, however, that those responsible should not think in global figures of billions of dollars of highway needs to be matched against billions of revenue, but that they should ask themselves whether each specific road project is justified by the taxes contributed by the users of that particular project.

From the point of view of employment policy, the Federal highway program also contains some dangers. Economists are now unanimously agreed that the Federal Government can help to even out business fluctuations by spending more (relative to revenue) during a depression than during a boom. Moreover, public works have been the traditional means by which the Federal Government has increased its expenditures when this was needed for cyclical purposes. It has been recommended that, as a measure to implement the Employment Act of 1946, the Federal Government maintain a list of projects which could be put into operation when a depression threatens or is underway. It is not clear whether such a list has ever been drawn up, but if it has, highway projects now incorporated in the Interstate System would no doubt figure prominently in it. The wisdom of undertaking those projects irrespective of general economic conditions must therefore be seriously questioned, for if a depression really comes about, the Government might then only be left with relief projects of very questionable usefulness. Another argument goes in the same direction. By undertaking major capital expenditure in a time of full employment, the Government drives up prices and wages and makes the whole project even more expensive than it need be. Although the present program is hardly underway, these tendencies have already become manifest. It might be argued that, since the present program is being financed by current revenues, there is no danger of such an inflationary development. Unfortunately, this is

not so, for some of these current revenues are, in effect, merely a transfer from general revenue, and the matching between receipts and expenditures during the life of the program is by no means exact. It would have been much better if expenditures under the Federal highway program were to be regulated with reference to general economic conditions, which was the intent of the Employment Act of 1946.