WHAT PRIZES WHEN ONE SUBSIDIZES? SOME LESSONS FROM THE PAST

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This paper reviews past U.S. subsidy programs in both agriculture and transportation to establish facts about federal subsidies and apply these facts to current federal transportation subsidy programs. Two points are made. First, traditional transportation subsidies paid by the federal government have been justified in terms of national advantage. Based on this assumption, the case for federal subsidization of urban public transportation would be in extreme difficulty. This point primarily establishes reasons why urban transportation subsidies should not exist. There is, however, another approach, which leads to the second point that a new case for federal subsidization can be made strictly in terms of local advantage. An argument is presented for this new case.

•THE POLYPHONIC message of the various definitions of subsidy comes to this: There is definitely a subsidy if there is a government payment to a private individual or corporation for a specific and specified purpose, in addition to whatever funds the recipient earns or expects to earn on his own.

To extend the definition into the not-so-positive, there may be a subsidy if there is special tax treatment for an industry or other economic entity, if there is special tariff protection (or special tariff concessions), or if there is some other governmentally administered device such as a minimum-price program.

For present purposes, I will confine myself to a meaning of subsidy that is limited to government partial payments for services that also receive income from the fare box or its equivalent. I will not confine myself to the traditional usage of subsidy as referring only to government payments to private enterprise, because there are few private enterprises left in the field of urban passenger transportation and hence very restricted opportunities for such government payments. Nor will I confine myself, rigidly, to specific or specified purposes. Part of the interest of the subsidy question lies in the distinction between subsidies that are aimed at a specific target and have a high prospect of hitting it and blunderbuss subsidies that rely on the proposition that it is worth the cost of the gun and the ammunition to see whether anything drops when one pulls the trigger.

Now that we established the ground rules, we may return to our basic text: the Joint Economic Committee's report, Subsidy and Subsidy-Effect Programs of the U.S. Government. The ground rules have simplified the problem by eliminating subsidy-effect. After this simplification, the classic or straight-out government payment in partial support begins to show an exceptional affinity for the transport sector. But, to bring transportation squarely within our sights, we must mention a whole category of subsidies that have managed to slip past our definitional barriers. These may be summed up in the extremely broad term, the farm program.

So what does the farm program have to tell us about subsidies or transportation in any of its forms? It can tell us quite a lot, but much of it is negative and most of it political. The first negative contribution of the farm program, of course, is that it has been designed to raise farm prices and thereby to raise farm incomes; in contrast, the classic subsidy program is supposedly designed either to lower prices to consumers directly or at least to enhance efficiencies in one way or another so that prices may be lowered in the long run.

But this contribution probably looks more negative than it is because of the exceptional characteristics of farm costs and in particular the costs of the farm labor force. Outside of California, this labor force is almost entirely nonunionized. In the Corn Belt, which constitutes the heart of American agriculture, it would appear to be nonunionizable. On farms with a total value of $500,000 and more, labor supply is still largely drawn from the operating family. Government programs to raise farm prices will increase farm land values and may even increase the incomes of renters as well as owners; but they cannot build in a higher, rigid plateau of input costs for labor or any other factor of production. Higher incomes follow the program, and they are meant to follow the program; but they are not an institutionalized by-product of the program.

This is quite different from what is likely to happen with respect to urban subsidies. It may almost be stated as a fundamental economic axiom that it is impossible to design a direct subsidy that is meant to assist a group of urban consumers without raising some factor costs in the process. Politically speaking, this statement may seem naive and would certainly appear to be unworthy of emphasis. Whoever heard of a political body sponsoring what purports to be a consumer subsidy without the stimulus of ample advance lobbying? And whoever heard of consumers who were willing and able to carry the entire burden of such lobbying? In short, whoever heard of a supposed consumer subsidy that was not at least in part designed by and instigated in behalf of representatives of the supply side of the market?

In short, urban economics may be an economics of exacting, exciting, extreme, and even excessive competition, but it is not an economics of textbook pure competition nor even an economics of the agricultural version of pure competition. Urban economics might be described, instead, as a battleground for actual and attempted market controls. Subsidies may possibly, therefore, tend to raise unit costs as well as lower unit prices.

This is no mere theoretical speculation. Some of the opponents to operating subsidies for urban transportation, as contrasted with capital subsidies, assume that the former are likely to raise unit costs more, and more rapidly, than the latter. Unlike a farm program, which will raise prices first, raise incomes second, but perhaps atone for some of these effects by raising productivity third, a subsidy program in an urban environment runs the danger of freezing productivity first, then raising incomes second, and possibly not lowering prices third. There is even a possible fourth stage: Productivity may eventually be even lower than it was at the outset.

So, from the standpoint of the mechanics of the markets in which they operate, agricultural subsidy programs tend to have an advantage over urban transportation subsidy programs. But agricultural subsidy programs also have a similar advantage over practically any other subsidy programs, for the same basic economic reason. Even in markets where price and output are controlled by the government, as has been the case with some agricultural programs, the supply-side aspects of pure competition remain virtually intact. Farmers may be restricted to fewer acres or even cut back by marketing quotas that lower output, but they are encouraged to operate within these constraints to produce as efficiently as possible.

There is probably no counterpart to this genuinely supply-side pure competition anywhere in the urban economy. This may be illustrated not merely by urban transportation, but also by the seemingly different world of medical economics. The supply of medical services involves personnel whose incomes range from some of the highest in the country to some of the lowest paid urban workers. It involves a budgetary mix, even in the absence of any government financial support, that ranges from the receipts and motivations of a discriminating monopolist to pure charity. It employs a heavy proportion of female labor. Unless one counts the American Medical Association as a union, it is nonunionized in critical areas of supply and is organized only on a spotty basis elsewhere. Yet, in an environment that would seem in most ways to be protected from the inflationary aspects of government spending, the most obvious effect of government subsidies for medical services has been to drive up the prices and costs of these services.

The one question regarding agriculture and subsidies is, "Can you aid consumers if producers get there first?" No one ever confused acreage limitations and marketing quotas with food stamp programs; so no one has seriously thought of agricultural programs as consumer-oriented even in their basic intent. But, within the confines of producer-oriented programs, each producer is left with the profit and loss incentives and the ability to minimize at least some costs, which are sufficient to propel him partway toward efficiency. In this respect, farm programs are two steps ahead of urban transportation. Almost throughout the United States, urban transportation has been burdened with losses so that the whole idea of profit has become irrelevant from the financial and motivational standpoints. And only the very naive could believe that factor prices in urban transportation are divorced from government subsidies, especially if the government that is doing the subsidizing is not the government that is operating the transportation system.

But the classic area for government subsidy, in the sense presented earlier, is the area of transportation. The one type of legislation in which Congress has been bold enough to use the word subsidy is that pertaining to the construction and operation of vessels for and by the U.S. merchant marine. Historically, the outstanding examples of government subsidy are related to the construction of many of the American railroads. In the same period, the post office was subsidizing American packet service on the high seas. Commercial aviation was subsidized from the same source practically from the outset, and residual CAB subsidies for local service carriers continue.

Transportation assistance established that subsidies need not be restricted to private enterprise. Some states or localities assisted private railroad builders, but others constructed facilities themselves with the intent of selling or leasing them at a loss to private operators. Still others absorbed a loss in transferring public investment to private operation.

But what do urban transportation subsidies have to do with historic transportation subsidies or their survivors? This question can be addressed along several lines. Traditional transportation subsidies paid by the federal government have been justified in terms of national advantage.

The locus classicus is the bundle of land grants, loan guarantees, and other inducements offered not only for the central route across the Great Plains and the Rockies, but also for the construction of the Northern Pacific and for other railroad construction designed to tie the West Coast to the Eastern Seaboard. Indeed, the national aspect of these subsidies was so prominent that disagreement about routes was an element in sectional discord before the Civil War. The southern routes occupied by the Southern Pacific and the Santa Fe could be postponed in favor of the central routes only after the southern states had seceded from the Union.

Even before the push to the West Coast, national advantage was tied into public subsidy in a straightforward way. The Illinois Central was the first major railroad to receive important federal aid in the form of land grants. And, inasmuch as the federal government facilitated railroad construction by ceding alternate sections of land, it doubled its asking price on the remaining sections to recoup the subsidy by capitalizing on the national advantage created by the railroad.

The Civil War conditions that permitted the authorization of transcontinental railroad construction on the central route also facilitated the passage of the Homestead Act; so the earlier idea of the self-liquidating subsidy was not carried across the continent. Given the quality of land over much of the territory from the Missouri River to the Pacific Ocean, this would have been difficult in any case. But the combination of federal railroad subsidies and the Homestead Act may be viewed as two different subsidies, each regarded by Congress as in the national interest, designed to spur the growth of population and economic activity along the routes of the subsidized railroads as well as to encourage the attachment of outlying areas to the remainder of the country.

Merchant marines can now receive both construction and operating subsidies whereas even Penn Central is living more or less from hand-to-mouth on what might be called only a bare survival subsidy.

At first sight, the maritime program appears to be the practical opposite of our nineteenth-century railroad program, which tied the West Coast to the rest of the United States. In the process, it created both employment and outlets for capital equipment, which were exceptional by the standards of the day. The merchant marine programs, on the other hand, employ remarkably few people per dollar of government expenditure and are scarcely fundamental to the success of the capital-equipment industries of the United States.

So how can we explain the mutation from a railroad subsidy program, more than a hundred years ago, which had several genuinely national attributes, to a merchant marine program that looks like an extension of rivers and harbors bills? The probable answer is that we cannot, completely, in terms either of economics or of current politics. The political largesse distributed by the maritime unions has been well-publicized. But it is nevertheless true that the average member of Congress either comes from some inland district or at least represents a seacoast area not blessed with major ports. Even New York City, possibly the world's outstanding example of a city whose whole configuration is adapted to seaborne commerce, is turning its back on maritime pursuits in terms of both geography and employment.

Therefore, the answer must be sought partly in history and partly in sociology. Ports die hard. They reflect a political afterglow even after they become moribund economically. And everyone having to do with ports, from directors of port authorities to mayors of cities, has had practice in finding the way to the pork barrel. Moreover, although there is no logical connection between American ports and an American merchant marine, these separate structures may be entered through the same lobby. Economically speaking, port authorities should regard all flags as flags of convenience. But, in terms of politics, there are necessary relationships between ports and seafaring and the construction of merchant vessels. Historically speaking, the maritime subsidy lobby has had ample time to integrate its various components and to associate them with some of our major cities, some of our most populous states, and some of our most single-minded Congressional committees.

The second part of the answer, which doubtless conveys a significant lesson for urban transportation, lies in the realm of popular sociology. Theodore Roosevelt revealed his most consummate showmanship in connection with two maritime ventures: the Panama Canal and the Great White Fleet. A strong merchant marine is associated—in the popular mind if not in practice—with a strong navy, and a shipbuilding industry provides naval support in fact as well as fancy. Navies may be obsolete, but the glamour of the sea most certainly is not. Buses have little glamor, and urban buses have even less. In terms of their total environment, most American subways probably have least of all. Nor is sheer glamor the only element in creating a psychological difference. A specific level of New York subway fares may be more important to the defense of the United States than a new merchant vessel, but this remains to be established. No one has even tried.

The idea of government subsidy for transportation purposes did not simply move from the land to the sea over a long period of time. It also took to the air. The idea of national defense, or at least of national interest, has been an important feature of our commercial air policy almost from the beginning. The modern variant of the old air mail subsidy, in the form of CAB payments to local-service airlines, is scarcely more than the tip of the iceberg. Far more government dollars every year are spent on behalf of general aviation; but, because these dollars take the form either of not levying certain taxes that could be levied or of not rigorously attempting to allocate federal airway and airport assistance by type of aviation benefited, the word subsidy is harder to interpret for air modes than for land and sea modes. Whatever the interpretation and however large the dollar amount charged against it, general aviation is heavily subsidized at the federal and sometimes at the state and local levels, and the explanation for federal subsidy is specifically national defense or, more generally, national interest.

It is not surprising that a program of federal expenditure is justified in terms of national advantage. Try to justify any kind of government spending on grounds of national disadvantage. But, in all the cases cited, the vague idea of national advantage has served as a background for the development of more specific cases based on development arguments. When the development argument had to be applied not to a thriving infant but to a moribund relic, as was the case with the merchant marine, then the economic aspects of manifest destiny were played down in favor of the political and even the military aspects. No one has ever expected an American merchant marine to have very profound effects on the growth rate of the gross national product. But many individuals, in politics and out, have responded to the idea of showing the flag.

It should be clear by now that the case for federal subsidization of urban transportation is in difficulty on several counts. Given the organization of American society, such a program cannot be national in the sense that all residents of the country may be assumed to have at least some access to the services being subsidized. Nor is there a straightforward case that such subsidization aids economic development. Perhaps most important of all, the psychology of public transportation has not caught the imaginations of the American public as it apparently caught the imaginations of those who were responsible for the subways of Moscow, Mexico City, and Montreal. Even BART, which was originally heralded with enthusiasm, has so far mainly achieved the limited objective of proving that computers and commuters may not mix.

Up to this point, I have presented a number of reasons why urban transportation subsidies should not exist. Yet they do exist, they are growing, and they give every indication of continuing to grow. Even the hesitancy about operating subsidies, rooted in part in those fears with respect to factor payments and factor productivities that have already been discussed, is yielding in the face of prosubsidy pressure. So what can be the purpose of the discussion? Fortunately, a further line of inquiry is yet to be explored.

A new case for federal subsidization can be made strictly in terms of local advantage, but it must be a careful case, and it must not stop at the edge of the metropolitan area. One area that has scarcely been explored by economists, politicians, or engineers is the area of "What if?", which is also the area of the quantum leap and of distinct alternative hypotheses. It begins with a reductio ad absurdum. Assume the population of the United States to be spread evenly over the surface of the countryside or at least spread as evenly as climatic conditions permit. Then there would be no need for urban transportation and indeed no possibility of it. Everyone would have to cultivate his or her own garden. On this extreme assumption, it is of course questionable whether all these gardens would even keep those who tilled them alive.

In less metaphorical terms, the concept of nodality is clearly related to any very advanced level of economic well-being or culture (as is evident, indeed, from the very origin of the words civilization and urbanity). If the concept of nodality is related to higher as opposed to lower levels of well-being and civilization, then some particular orderings of nodality must produce economic, if not social, results that are superior to other orderings. A United States organized around 50 state capitals with 1 million population each would relate to economic efficiency as the human eye relates to the eye of a fly. The idea of nodality implies larger nodes and smaller nodes and some recognizable pattern of geographical distribution of both larger and smaller.

Next we might bring in the impact of taxes. In the days of Henry George, the problem looked simple: Assess a single tax on land, and the nodal points with their high real estate values will automatically yield so much more per acre that they may also even yield more per capita. Even now, it is true that the least of all central business district problems is a low taxable value per unit of resident population in the CBD. The problem, however, is increasingly one of an escape of taxable values beyond the confines of central business districts and even central cities, with no comparable escape or even with an accretion of dependent populations whose public services must be derived in the main from urban real estate taxes.

The next familiar step in the argument is that the function of a city is to permit the meeting of minds. Face-to-face, head-to-head, or eyeball-to-eyeball, these confrontations can accomplish more and can do it faster than any combination yet invented by IBM. Minds require very little space. Their owners may luxuriate in expensive offices that bear heavy taxes, but even these investments may be less per worker than those required for the operation of an ordinary machine shop. It is not just the real estate, as such, that generates the income; it is the meeting of minds that might be worth little in solitude but is very productive, and therefore valuable and expensive, in conjunction. So New York and other cities generate heavy flows of income tax—personal and corporate—per capita, per worker, or on any other basis of measurement.

If the United States were simply a collection of city-states, the taxation and expenditure pattern would have to work itself out on a regionalized basis. But, as it happens, the federal government has become the major collector of the most important, and flexible, and in almost every sense progressive of all taxes, those levied on income. If the meeting of man and machine generates property or sales taxes, the meeting of man and man generates income taxes. Therefore, if there are any special productivity advantages in having New York City as a substitute for a vastly extended Central Park, these productivity advantages tend to generate income primarily and property values only secondarily. And, because the fruitfulness of a meeting of minds is a function of the number of minds meeting, there must be a case for at least a few very large population agglomerations. And very large agglomerations of population must rely on urban transportation.

Now we attempt to tie together all the threads of our argument. If having at least some large population centers produces an economy that is more productive than anything envisioned by Thomas Jefferson and if the taxes that represent a partial siphoning-off of this superior productivity are for the most part remitted to the federal government and not to the city or its metropolitan area and if both the maintenance of this national productivity and of this tax flow from city to center depend on a degree of agglomeration that can only be supported by efficient urban transportation and if the tax funds remaining after remittances to the federal government are inadequate to supply all other needed metropolitan services and adequate transportation as well, then there may indeed be an economic as opposed to a political case for federal subsidization of urban transportation.

There are some warnings with respect to this chain of argument. First, it is obviously a chain that cannot simply be presented and then taken for granted once and for all. No one portion of the argument can really be quantified; no one step is logically inevitable; nothing in the entire argument really helps in deciding how much federal aid should be granted to urban transportation or in what form or subject to what stipulations.

Second, this chain of reasoning definitely cannot be used as a defense of or as an excuse for the institutional arrangements now used in connection with several forms of urban public transportation subsidies. For example, the idea of moving commuters by rail retains a psychological magic that is certainly not reflected in the financial results of any rail commuter service. Subsidy per rider is now far higher for rail commuters to the few cities of the United States that still offer that mode than for any other form of public transportation. Yet this heavy outlay has not reversed the decline in rail commutation that began some 50 years ago. Moreover, these riders tend to have above-average incomes and often begin their commuter journeys from residences in areas that are strictly zoned to ensure low residential densities and high minimum values per residence. An exceptional per capita subsidy to this group could still be justified on the basis of the argument presented. But, for residents of states such as Connecticut and New Jersey, who have no income tax, even the basic case would need considerable emendation if it is to satisfy the peculiarities of the New York metropolitan area.

Third, the idea that federal subsidies should be used to maintain the 35-cent subway fare in New York City, for example, is almost unquestionably self-defeating. Maritime subsidies may in fact permit a certain level of wages to be attained and maintained on shipboard, but Congress could never be expected to pass legislation, session after session, specifically designed to produce certain rates of pay. More generally, it is hard to see either an economic or a political future in the proposition that massive federal funds should be applied to aid one specific type of local expense that is incurred on a very large scale in only one city in the country and all this in order to build an artificial island of stationary prices amid the inflationary seas.

Fourth, there is an inherent conflict of interest between the subway cities and the bus cities, as well as between the actual subway cities and the incipient subway cities. The argument for nodality is not necessarily an argument for any given number of very large nodes or for a given number of nodes deserving of subway transportation. Yet, given the vastly higher per capita costs of a subway and the unglamorous character of the urban bus, the danger is that phase 1 will be characterized by a heavy imbalance of federal funds in the subway direction, followed by phase 2 involving the construction of marginal subways, followed by phase 3 involving much heavier demands from bus only cities for subsidy lest they, too, carry out their threats to go the subway route.

Fifth, as has been pointed out by many different people, federal transportation subsidies extended across the gamut of metropolitan areas would, in the first instance, underwrite the most far-flung patterns of residential, commercial, and industrial uses of space the world has ever seen. In the absence of invasion threats from Canada or Mexico, which would induce us to draw back within the walls, extensive subsidies might achieve not only an antinational but even an antilocal objective. In other words, the antiautomobile argument is not necessarily also protransit.

Sixth, although the meeting of minds hypothesis does not require that every mind be that of a genius nor even that there be any maximum number of auxiliary forces employed per mind, the fact remains that a considerable percentage of the population of American cities is ill-adapted, by intelligence, educational accomplishment, native language, or inclination, for employment in a meeting of minds environment. For this group, when old-line industries leave the center of metropolitan areas, the seeds of long-run tragedy are planted unless more active measures are taken than any so far contemplated. Given the proliferation of industrial parks, which might better be termed industrial parking lots, on the outskirts of every metropolitan area, the contribution of either transportation or subsidies for transportation is not self-evident.

Seventh, the political backing for subsidization has yet to congeal into a solid, dependable, long-run pressure group. At the moment, everybody hates the automobile, apparently including potential buyers of new cars. Many of these automobile haters are in the front ranks of those supporting operating subsidies for transportation. Yet almost none of the automobile haters has, in fact, abandoned his own car; proportionately very few have shifted from car to transit. In the nineteenth century, the railroad lobby was strong and well-organized and had both the means and the environment of public opinion that permitted the priming of the subsidy pump with a certain amount of corruption. In the twentieth century, the forces seeking maritime subsidies are capable of political teamwork worthy of a governmental Super Bowl. The push for subsidization of urban transportation is new and therefore does not have the veteran supporters found in other forms of transportation. But, in the process of organization, the various groups seeking aid for transportation must beware lest they greatly oversell their product or claim that subsidies can accomplish incompatible objectives or mistake passing fads for permanent tendencies. A case can, indeed, be made for urban transportation subsidies. This case may even contain economic allegations that are far from ludicrous even though they may not be subject to rigorous proof. But if this case is to be made, it must be anchored on assumptions more sophisticated than that of the inevitability of the 35-cent New York subway fare.