Volume Title: Public Finances: Needs, Sources, and Utilization

Volume Author/Editor: Universities-National Bureau

Volume Publisher: NBER

Volume ISBN: 0-87014-303-4

Volume URL: http://www.nber.org/books/univ61-1

Publication Date: 1961

Chapter Title: User Prices vs. Taxes

Chapter Author: O. H. Brownlee

Chapter URL: http://www.nber.org/chapters/c2280

Chapter pages in book: (p. 421 - 438)

User Prices *vs.* Taxes

O. H. BROWNLEE
UNIVERSITY OF MINNESOTA

I INTERPRET my assignment to be to indicate very generally the role of rationing governmental services by the price mechanism and of financing the provision of such goods and services at least partially from "sales receipts" rather than rationing these services according to criteria other than price and financing their provision from general revenue sources.

In cases in which the price mechanism can be employed, it is possible to assure that no one pays for services that he does not consider to be worth the price *and* that anyone can obtain service providing that he is willing to pay the cost. At least some of the ambiguity in statements about our "needs" for public services can be eliminated.

Although I favor using price as a rationing device wherever a reasonable opportunity exists, I believe that the appropriate area for application of market pricing to the determination of how much of various goods and services government should produce is a relatively small one. Opportunities undoubtedly exist for financing such items as fire and police protection partially on the basis of service actually rendered. Nevertheless, such cases would be relatively insignificant in terms of the over-all pattern of public expenditure. I see few *major* services that ought to be financed exclusively from sales revenue that are not already being financed in this way. However, the criteria currently used for establishing prices and for determining how much to produce are not necessarily the best ones. Furthermore, charges at less than cost might well be established for some services that are now provided free.

My criteria for evaluating whether a service is being rationed appropriately and whether the amount produced is optimal do not include the effects upon the distribution of income. If agreement could be reached with respect to how various income distributions should be ordered, the best one could be achieved independently of the production pattern of government services.

1.

A virtue of rationing services by the price mechanism is that such a procedure permits obtaining information regarding how users value these services relative to other things that they might obtain. Together with appropriate cost information, such demand data would permit one to determine whether too little or too much of a service was being produced. For services which have no external economies or diseconomies in consumption or production, i.e., the consumption level of one person does not enter directly as a variable in the utility functions of other persons and the production level does not affect the physical productivities of resources in other uses, setting the price equal to marginal production cost and noting whether there is excess demand or excess supply can, under certain conditions, tell one whether too little or too much is being produced—provided, of course, that the optimal level of output is not zero. If there are external economies or diseconomies in production or consumption, services still might be allocated by the price mechanism, but the optimal amount to produce would not be that at which price is equal to marginal cost.

The validity of these assertions and the conditions which must prevail in order for them to be used as the basis for good rules to guide resource allocation are well known. I will not reproduce the "proofs" here. Instead let me try to indicate their applicability to determining which services should be "priced" and how the resulting pattern might compare with the existing one.

2.

Among the goods and services that should not be priced are those currently labeled by economists as "public" or "community" goods, i.e., those which can be consumed by one person without a reduction in the quantities available to others.[1] "Voluntary" contributions for the support of such activities will not necessarily be sufficient to obtain the best amounts of them, since there seems to be no reasonable way of inducing persons to reveal their true preferences

[1] Paul A. Samuelson, "The Pure Theory of Public Expenditures," *The Review of Economics and Statistics*, November 1954, pp. 387–9; Stephen Enke, "More on the Misuse of Mathematics in Economics: Rejoinder," *ibid.*, May 1955, pp. 131–3; Julius Margolis, "A Comment on the Pure Theory of Public Expenditure," *ibid.*, November 1955, pp. 347–9; Samuelson, "Diagramatic Exposition of a Theory of Public Expenditure," *ibid.*, November 1955, pp. 350–6; Samuelson, "Aspects of Public Expenditure Theories," *ibid.*, November 1958, pp. 332–8.

for such goods relative to others. Although there is no unanimity with respect to which services fall in this class, expenditures for defense and associated activities fit this classification and bulk large in the over-all expenditure pattern.

At the other pole is the class of services produced under conditions of constant or increasing marginal production cost and of a character such that there are neither external economies nor diseconomies of production or consumption associated with them. These should be rationed by price (or a mechanism comparable to the price mechanism), and the output at which the market clears when price is equal to marginal cost is the appropriate one to produce. For the most part, such services are not produced by government except in cases where the cost of collecting from users in accordance with quantities used is high relative to production costs. However, there is no inherent reason why government should not produce such goods providing that it attaches appropriate values to the resources that are used in production, allows for the restrictions that it imposes upon private producers in determining costs *and* does not cover losses from general tax revenues. That one or more of these conditions would be violated is not unlikely.

In between these two extremes are those services which have external economies in consumption and/or decreasing marginal production costs leading inherently to monopoly. Those with pronounced external economies in consumption generally have been produced by government; those with obvious increasing returns generally have been subject to regulation.

3.

A detailed description of governmental services which can be classified accurately according to the three categories suggested—"public goods," services with pronounced external economies in consumption and/or production, and services which should be priced at marginal cost—is not readily available. However, a cursory examination of aggregate data suggests the following somewhat crude allocation of some of the major service categories: (Table 1, on following page.)

The above classification is somewhat arbitrary and does not reveal the things that are of interest in determining whether services are being produced in appropriate quantities. Although it is a picture for only one short period of time, this picture is not an atypical one.

TABLE 1

Categories of Government Service[a]	*Expenditure* (billions of dollars)	*"Sales Receipts"* (billions of dollars)
A. "Public goods"		
1. Federal government		
a. General government	1.7	
b. National defense, including atomic energy, USIS, mutual security, State Department, and research and development	48.6	
c. Health, hospitals and medical (largely veterans)	2.4	
2. State and local governments		
a. General control	1.7	
b. Public safety[b]		
(I) Police	1.5	
(II) Fire	0.8	
c. Health, hospitals and welfare		
(I) Welfare	3.4	
(II) Hospitals[b]	3.2	
B. Services with pronounced external economies		
1. State and local governments		
a. Elementary and secondary Education	11.9	
b. Sanitation		
(I) Sewage	0.9	
(II) Other sanitation	0.5	
C. Saleable services		
1. Federal government		
a. Postal service	4.1	4.0
b. General aids to business	0.2	
c. Higher education	0.45[c]	
d. Highways		1.0
2. State and local governments		
a. Higher education	1.5	0.4
b. Highways	7.8[d]	4.0[e]
c. Public utilities	3.5	2.9
d. Liquor stores	0.9	1.1

[a] Data for the federal government are for 1960, and are from Executive Office of the President, *The Federal Budget in Brief*, Fiscal year 1960. Those for state and local governments are for 1957 and are from *State and Local Government Finance in 1957*, Bureau of the Census, February, 1957.

[b] Police and fire protection as well as hospitals contain a component that is clearly not in the category of "public goods." However, I prefer to err on the side of making the category of saleable goods too small rather than too large.

[c] Included in state and local expenditure and should not be counted separately.

[d] Includes some capital expenditures that should not be charged exclusively to current services.

[e] Estimated. 1955 fuels taxes and auto, truck, and bus registration fees were $3.65 billion.

Of particular interest is that (1) there are no "sales receipts" from services that benefit both the users and other parties (i.e., have pronounced external economies in consumption)—although some such receipts probably should be attributed to sanitation—and (2) there is a substantial amount of support from general tax funds for a service that I have classified as one that should be sold at marginal cost—higher education. Included in the expenditures for this service are those for research, so that all of the difference between expenditures and receipts should not be attributed to higher education. Nevertheless, I believe that nearly everyone agrees that tuition receipts at publicly supported institutions of higher education are less than the costs that reasonably could be allocated to the teaching function.

Even though expenditures and receipts are approximately equal for the postal service and may be approximately equal for highway services—if capital expenditures were accurately estimated—it does not follow that these services were produced in the optimal amounts since their prices were somewhat arbitrarily determined and the cost computations probably omitted imputed property taxes and underestimated capital costs.

4.

As I asserted earlier, the fact that a service has external economies associated with its consumption does not imply that it should not be priced. Consider some of the implications of pricing the services of elementary and secondary schools.

Elementary education is a commodity that is believed to have such important effects upon persons other than those who obtain it that it has been made not only free but compulsory. To make persons pay for something which they may not wish to consume generally would not be considered desirable. However, there may be decided advantages to widening the choice of what might be consumed; and there are potential gains from inducing suppliers to minimize the cost of producing whatever they produce. Combining payments to persons conditional upon these payments being spent upon elementary education with institutional arrangements whereby any entrepreneur who meets certain minimum production requirements is qualified as a seller could further both of these objectives.[2]

[2] See Milton Friedman, "The Role of Government in Education," included in Robert A. Solo, ed., *Economics and the Public Interest*, Rutgers University Press, 1956.

Adoption of such a proposal would not answer the question, "Are we spending the correct amount upon education?" but it would provide a more satisfactory answer to the question of whether that which was being made available was being provided at minimum cost.

Services that benefit persons other than the immediate users could be offered to users at a price below marginal cost or a subsidy could be provided to users, as was suggested above in the case of elementary education. The latter procedure appears to me to be preferred in that it permits a greater element of competition among suppliers. Thus rather than directly providing innoculations, medical examinations, etc., the government might give each person a minimum grant conditional upon its being used for such purposes and let the person select his own supplier.

5.

Let me now turn to the potentialities of the pricing mechanism for determining the appropriate production levels for highway services and higher education. The former service is one that many persons contend ought to be priced; the case for pricing the latter is less generally accepted.

In this discussion I shall not consider the problems of city streets. The metropolitan transportation problem is one of congestion together with pronounced external diseconomies in consumption to some urban residents. The purely mechanical problems of charging tolls for the use of the street system along with the space-saving features of mass transport suggest subsidization of bus and subway transportation on a large scale. My concern, however, is with the so-called trunk highways and rural roads.

The benefits from investment in such highways have properties such that a highway investment can be evaluated in the same manner as can any investment designed to produce goods and services that are to be sold. To speak of highway services as if they constituted a single homogeneous commodity is to err in the same way as to speak of food as a single good. I will avoid discussion of how such services should be defined except to assert that some of our difficulties in analyzing highway problems arise from inappropriate definitions of highway service. Traveling a particular distance, at a given speed and with given comfort and safety may be as different—in the mind of the highway user—from traveling this same distance

at another speed and with other degrees of comfort and safety as a pound of sirloin steak is from a pound of potatoes. Truck travel differs from auto travel, etc.

Although there are many different kinds of highway services, nearly all of them benefit the highway user—in the case of services provided by passenger car travel—or the benefits are passed on to other persons from whom a collection can be made—through commodity prices, in the case of truck services—in the same way as are the benefits from technological improvement or additional capital used in a farm or factory. In general, highway services are like food in that one person has no interest in another's consumption pattern (except for its effect on prices).[3] The case for distributing highway services and for determining their appropriate levels of output by a price-cost mechanism is as strong as that for any other commodity group.

The statement that the distribution and production of highway services should be guided by price-cost criteria does not mean that we should set up toll stations at every street corner and every cross-road. Because of collection costs and inconveniences that may be more distasteful than congestion, toll roads can play a very limited role in the highway system. However, in principle, one could establish an over-all fee schedule of motor fuel taxes, weight-distance taxes, license fees, and other charges which would yield a rational allocation of whatever road and street facilities were available. And, we could account for costs and revenues so that we could get about the right amount of highway investment and distribute it fairly well geographically. In fact, the structure of charges to highway users already may be fairly reasonable and actually improving, although we are without some of the information required to construct a good fee catalog. The provision of facilities probably is less rational, relatively speaking, than is the fee schedule, although we can only make rough guesses about this from existing data.

Except on toll roads, the basic charge for the passenger auto is

[3] That different degrees of highway congestion are not all equally satisfactory to a highway user might appear to nullify the assertion that one man's consumption is of no concern to other men, and vice versa. However, if we consider travel at one speed, safety, etc., as a different commodity from travel at another speed, safety, etc., there is no contradiction in the formal statement. More congestion is analogous to the higher price for steak that would result from an increase in its demand. The highway user would be indifferent to some higher fee with lower congestion and the low fee with more congestion.

the motor fuels tax.[4] Fuel consumption is an index of distance traveled for any vehicle, although distance traveled and amount of service are not uniquely related as long as highways and speed of travel differ. However, to account for highway quality differences by differences in fuel taxes probably is not feasible. Since passage for the passenger auto is the least costly to provide, the fuel tax can be used as a kind of toll. Special fees for passenger cars may be warranted in large cities where congestion is a problem, such fees being in accordance with the higher costs of providing a given level of service in areas where land values are high. Similarly, special assessments or special license fees for residents of very sparsely settled areas may be advisable. In this case, such fees are in accordance with the high value of the service rendered by the highway.

For trucks and busses, fuel taxes are supplemented by license fees in recognition of the differences in costs imposed by passage of vehicles of different characteristics. However, license fees cannot be varied sufficiently to tax equitably the many different classes of weight and distance combinations. Weight-distance taxes are preferable and could permit different fees for different routes. In fact, weight-distance taxes might be administered in a manner similar to that used in collecting the personal income tax from self-employed persons. Estimates of tax liabilities to be incurred during a year might be filed, and taxes paid on this basis. Differences between actual and estimated liabilities could be settled at the end of the year.

Some of the implications of using price-cost comparisons to a greater extent in making highway decisions are of interest.

1. If prices and costs are appropriately determined, not only the highway system as a whole, but each separate entity should "pay for itself" in an accounting sense when the system is optimal.[5] Otherwise sectors of the system that are "making a profit" and ought to be expanded may be supporting sectors that ought to be contracted. This possibility cannot be detected when only the revenues and costs of the system as a whole are examined.

[4] Data relative to the demand for highway services as well as to the costs of providing them are not adequate for determining what prices to establish. Engineers are undecided as to whether a highway designed to carry heavy axle loads can carry passenger cars at zero marginal maintenance and construction cost. Economists generally would argue that a highway having such characteristics is "overdesigned," i.e., the capital investment is excessive. However, if such a relative cost relationship actually exists and congestion costs are zero, passenger car operators should pay only for the privilege of using the highway—i.e., license fees.

[5] Because of indivisibilities, equality between imputed revenues and imputed costs may not be achievable.

That highway users should pay for the highways has much, though not universal, support. However, that each clearly distinguishable sector should pay for itself is less widely supported—except possibly for toll roads. In particular, it is my belief that generally there has been relative overconstruction of rural nontrunk highways, although this belief can neither be adequately supported nor refuted with existing data.

2. The prices that have to be paid for resources are taken as reliable estimates of the value of the product that has to be sacrificed in order to expand production of one good. Government pays the same prices for labor and materials as do other users. However, it borrows money at more favorable terms (at a lower rate of interest) than does the typical private borrower. This lower interest rate reflects primarily the confidence of the lender in government's ability to repay—not in the relative merits of the projects. Government can tax (or print money, if it is the federal government) to repay loans. Private borrowers must repay out of earnings. If government borrows at, say, 3 per cent, whereas private producers borrow at, say, 6 per cent, and both government and private producers use amounts of capital such that rates of return are equal to borrowing costs, government will be using too much and private producers too little. Shifting capital from the government to the private sector would expand total product. Government also should not invest in projects unless they would yield, say, 6 per cent, if capital is to be allocated in the best manner. Thus, decisions to build highways *and to* make other governmental investments should not be based on the rate at which government can borrow but on the rate of return on capital in other uses.[6]

3. Tax differentials, as well as differentials in costs of borrowing affect the relative prices of governmentally produced goods in comparison with privately produced goods. In the transportation field are special excise taxes affecting some kinds of transport (but not others) that encourage use of the highway system rather than alternative forms of transportation. These taxes ought to be abolished. However, there are also property taxes applying to nearly all private property. I do not consider a complete evaluation of the property tax to be appropriate for this discussion. However, to obtain

[6] See Arnold C. Harberger, "The Interest Rate in Cost-Benefit Analysis," included in *Federal Expenditure Policy for Economic Growth and Stability*, Joint Economic Committee, 85th Cong. 1st sess., 1957, pp. 239–41.

a better distribution of resources among various kinds of transportation, imputed property taxes on highways ought to be considered in arriving at highway costs, just as a "shadow" interest rate equal to the marginal rate of return on capital in private investment rather than the cost of borrowing ought to be employed.

To try to make my last two points clearer, imagine that there are two services—call them "rail transport" and "highway transport"—both of which could be produced at the same constant unit costs, if resource prices were the same to both industries. Assume also that the amount of either service demanded varies inversely with its price and directly with the price of the competing service. With the same interest charges and no taxes, the prices would be identical and certain amounts of each service would be produced. However, if one industry were charged more for capital than was the other and also had to pay taxes proportionate to the volume of service produced, its service would be priced higher than that of the other industry. Less of it and more of the other would be used than would be economic, i.e., than would be the case if "true" costs determined prices.

It should be noted that if the highways were to "pay for themselves" in the sense of yielding revenues equal to costs, including the imputed ones, there would be diversion of highway revenues to the general governmental fund. This diversion would be equal to imputed property taxes plus, say, 2 or 3 per cent of capital outlays—this 2 or 3 per cent being a rough estimate of the differences in borrowing costs to government and private borrowers.

4. Although it is not economically feasible to collect tolls except on a very small percentage of the highway system, tolls can be equitable rationing devices and can permit accurate accounting of the revenues attributable to a particular sector of the highway system. For these reasons, rather than minimizing the number of toll roads, I would employ them wherever feasible. However, certain practices in administering toll roads are not consistent with best use of the highway system. In particular:

a. requiring that toll roads pay for themselves out of tolls is uneconomic. Motor fuels tax receipts also should be credited the toll roads. To do otherwise will result in underutilization of such roads and overutilization of, or overinvestment in, freeways.

b. tolls should be much more flexible than toll authorities have

been inclined to make them in the past. Varying tolls with the demand would smooth the traffic flow and could make it approximate more closely that for which the road was designed. Ideally, tolls might fluctuate as do the odds at parimutuel betting booths or stock market quotations. In areas such as Manhattan where access is by tunnel or bridge, tolls to the island certainly should exceed those away from the island during the morning rush hours, and vice versa during the evening hours.

Fluctuations in tolls not only would aid in controlling traffic flows, but also would permit improved estimates of the demand for highway services. Such data are required for determining how much investment to make in highway facilities, and very few of them are available.

The service, higher education, is obtained by consumers because of its impact upon earnings—in which case it can be treated as an investment good—or because the knowledge is desired for its own sake—in which event it can be treated as a consumption good. In either event, I believe that investing in such education is like investing in any other capital asset and that the consumption of higher education by one person does not enter other persons' utility functions.

The statement that one person's consumption of higher education does not enter the utility functions of other persons is an assertion without either adequate proof or disproof. Some persons state flatly that they prefer to live among persons that have attended colleges or universities and that they are willing to pay to increase the number of such persons. Others believe that college trained people make "better citizens" and hence that support from general funds is warranted. This latter contention could be tested by analysis of such items as memberships on civic committees, attitudes on certain public issues where basic value premises are identical, etc. I believe that such analyses would show that, after standardization for such factors as native intelligence and incomes, there are no significant differences between persons with and persons without higher education. However, this belief may be contradictory to fact.

If my belief is correct, state colleges and universities should receive support from general tax sources only for research, tuition should be raised to cover instruction costs, and the terms under which people can borrow to invest in education should be the same as those

under which they can borrow to make other kinds of investments. I am not the sole protagonist of this general proposal and it has by now been widely enough voiced so that I need not develop it further.[7]

We have little information about the demand for educational services so that I can not make a good guess about what the pattern would be if such a proposal were put into effect. However, one would expect the distribution of education to be altered somewhat. Persons now attending college but not willing to pay the full costs would not attend; and persons willing to pay the costs but not now able to obtain funds would attend college. Also one would expect the costs of providing a given level of service to be reduced. Most important of all, the question of whether we need more facilities for higher education could be answered more satisfactorily than it can be at the present time.

6.

Allocating government services by pricing them has limited applicability. To me, an appeal of the price mechanism is that it provides information that would permit us to settle some debates about whether an expenditure is too large or too small. The use of prices in guiding how to produce a given level of service is an area that has not been discussed here. It also offers possibilities for improving resource allocation.

COMMENTS

E. CARY BROWN, Massachusetts Institute of Technology

In general, I agree with Mr. Brownlee's view that pricing is of limited applicability in the governmental sector. Practically, what prices should be charged even in the limited areas where they seem feasible is, however, a baffling question.

1. It is difficult to go beyond the general but empty principle that the best use of resources requires that marginal social benefit be equated with or exceed marginal social cost. Discussions of how this principle should be implemented run into trouble. The usual beginning is the view that the pricing system can perform admirably when there are no externalities in production or consumption nor increasing returns to scale in the particular industry in question.

[7] See Milton Friedman, *op.cit.*, for example.

From there on, depending on value judgments about governmental activity, we find assertions about the demand and cost conditions of various commodities that I find unconvincing.

Consider the following statements of Mr. Brownlee:

"In general, highway services are like food in that one person has no interest in another's consumption pattern . . ." (p. 427).

"In either event, I believe . . . that the consumption of higher education by one person does not enter other persons' utility function" (p. 431).

While these views may mirror Mr. Brownlee's tastes, they are unlikely to mirror everyone's. I would be interested in knowing how he reached such a general conclusion.

One piece of evidence I can offer is that other people's consumption of these two commodities does affect *my* utility. The satisfaction I derive from a social system is a function of its quality. In a tightly knit society such as ours, the quality of that society will depend on the education of its members, directly through the kinds of laws it enacts, if in no other way. I have, therefore, a considerably greater interest in other people's consumption of public education, both higher and lower, than I have in their consumption of oats, peas, beans, and barley.

My second assertion is that there may be extraordinarily large external diseconomies from the consumption of highway services that sometimes fail to be reckoned in. Otherwise attractive landscapes have been hideously scarred by roads; ugly strips of gasoline stations, eating joints, and billboards have moved such men as De Voto to crusade against them; hikers, cyclists, and the like have been driven off our streets; our cities are crowded with cars, fumes, and smog, and cluttered with stoplights, parking meters, and road signs; macadam glades bedizen factory and shopping center. Indeed, will the American future be that of a land flattened completely by bulldozers and embedded in a few feet of concrete, thus permitting auto travel by optimal great circle routes? To treat the output of highway services and higher education in the same way as the output of lollypops seems to me remarkable.

2. Some of our sharpest debates in public finance have been over such excise taxes as those on tobacco, an industry that perhaps is characterized by relatively few externalities. What is the best output

for this industry, whether operated privately or publicly? There are an infinite number of excise taxes, both positive and negative, and consequent prices that could be charged to consumers in this situation. Surely, it is not obvious that price equal to marginal private cost would necessarily be best. That depends on the unresolved argument regarding consumer sovereignty. Much of our debate in this sphere is whether or not price is a proper measure of marginal benefit—whether smokers are not just harming themselves.

3. That leads to the next point—the removal from discussion by Mr. Brownlee of distributional considerations in the choice between user prices and taxes. Both from a pedagogic and theoretic point of view, there is much merit in separating distributional from efficiency considerations. Since, in theory, a system of lump-sum taxes and subsidies can distributionally bail out any price configuration, attention can be directed either toward the rationing function or the distributional function of prices. Much can be learned from this instructive exercise, provided the rules of the game are not confused with those of the real world. For here, there simply do not exist nondistorting taxes and transfers that can make appropriate distributional adjustment. Indeed, the feasible political alternatives may be very limited. It is necessary, therefore, to appraise both distributional and efficiency considerations in any realistic political situation. Unfortunately, we must be satisfied with second best. It may be a closer approach to an optimal situation to employ the price system to redistribute income, even though a divergence between marginal rates of transformation and marginal rates of substitution may result, than it would be to make price decisions on the assumption that somehow the proper distribution of income will be achieved by other social policies. We must, therefore, make interpersonal comparison of utilities.

4. Now, suppose we do wish to follow marginal-cost pricing. Mr. Brownlee would have cost computations based not on the interest cost of funds to the government, but instead on the rate of return on capital in alternative uses. He refers approvingly to Harberger's study in this connection. I find myself in general agreement with this view, but do not reach the same policy conclusion as he reaches. He considers, for example, the case in which the government interest cost is 3 per cent and the private rate is 6 per cent. As I understand it, he would charge the 6 per cent rate against government projects, rather than the 3 per cent rate. Yet if, as Brownlee

says, the differential interest cost of 3 per cent is attributable "primarily [to] the confidence of the lender in the government's ability to repay—not on the relative merits [or riskiness] of the projects," should not the 3 per cent rate be used in private projects rather than the other way round?

The government rate presumably reflects the greater pooling of risks, just as in the private sphere we find many different borrowing costs depending on size of firm and its ability to combine risks. In an ideal world would it not be desirable for all investment decisions to be made on the basis of a rate of interest from which was absent a premium for lender's risk? Is it obvious that we would move closer to an optimum by saddling all investment decisions with this premium, rather than taking steps to reduce or eliminate it? True enough, there may be underinvestment in the private sphere because marginal private cost exceeds marginal social cost. But is it clearly incorrect for the government to base its decisions on the pooling gains from scale that it achieves? One would find, I expect, that, if lender's risk were fully eliminated, the government interest cost might be raised somewhat higher than the 3 per cent rate. But I fail to see why it should move all the way to the private rate.

Even were private interest cost the proper rate to use, the empirical rate indicated by Brownlee and Harberger seems to me to be overstated for two reasons. One is the failure to distinguish between marginal and average rates. The other is the inclusion of yields on equity capital grossed up by the profits tax. If the interest cost of the government and of large business concerns were compared, not nearly as large a differential is found as the ones they use.

I also have the uneasy feeling that inclusion of the property tax in the computation results in imposition of the same distorting effects in the public sphere that we find in the private sphere. Such a movement does not necessarily lead us toward an optimum.

Granted that there has been much loose thinking about criteria for governmental investment decisions, Brownlee and others have performed a real service by emphasizing the relevant factors. But it may be a disservice to overcorrect the governmental decision. The application of frictions present in private investment decisions to governmental decisions may worsen things, not improve them.

5. Economists must ever be alert to the advantages of the price system. But we may not be adding to social output if we insist on its inevitable advantages when these depend only on particular value

judgments applied. In the area of user prices versus taxes, where the interpersonal comparison of utility is required, and where our choice must be between second best alternatives, an agnostic posture would seem to conform more closely to the present state of our knowledge.

C. HARRY KAHN, Rutgers University

As Mr. Brownlee suggests, the division between services with pronounced external economies (Category B) on the one hand, and saleable services (Category C), on the other, is apt to be somewhat arbitrary. I think this is not primarily because of any lack of "detailed description of governmental services" but rather in the nature of the classifications chosen. The arbitrariness is introduced because the services listed in Category B are apparently considered not saleable because of their pronounced externalities whereas Category C-services are presumed to have no externalities and to be produced under conditions of increasing or constant marginal production costs and therefore saleable.

Actually such a dividing line is well-nigh impossible to draw. Almost all the services under B and C can be sold and have externalities. Category C, as defined, is practically nonexistent as Brownlee himself notes (p. 425). Few services produced by government have no external economies or diseconomies or increasing returns to scale. On the contrary, one or the other is usually the reason for governmental performance. Can it be shown that externalities are greater for sewage than for the postal service and highways (not to speak of higher education)? And are higher education and highways "saleable" in the same sense as liquor?

In short, I suggest that the difference between B and C is one of degree rather than kind, and that a simpler and more useful procedure would be to list all of the services in Brownlee's B and C categories as "saleable services," ranked in descending order according to the degree of external economies associated with each service, and hence in ascending order according to the degree of saleability. Such rankings would still involve considerable judgment and arbitrariness, but at least an arbitrary conceptual division would be removed.

Can all government services then be subsumed under either the public goods or saleable category? I would find it useful and convenient to add a third, "redistributive expenditures." Practically

all government expenditures have, of course, incidental redistributive effects, but for some the stated purpose is clearly redistributive. Among others, welfare expenditures and veterans services would fall into this category. Such services are, almost by definition, not saleable, and they can hardly be considered public goods if one defines them—as Brownlee does—as goods which can be consumed by one person without a reduction in the quantities available to others.

The merit in dividing government expenditures into public, saleable, and redistributive groups is thus that the dividing lines are sharp and meaningful.