CHAPTER 16, “Public Goods and Public Finance,” FROM THE BOOK:

The Science of Economics

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1. Public Goods

The public consists of two or more persons. If an economic goods is being used by two or more persons at the same time, it is a public good, otherwise it is private. Public goods are also called collective goods. For example, if you eat a sandwich, it is a private good, since it is going into your mouth and nobody else's. On the other hand, if you and a friend are watching one television, the TV is a public good. Clearly, the same object can be private or collective depending on its use at a particular time, since if you later watch the TV alone, it becomes private.

The total quantity of a private good in an economy is the sum of the goods being used by individuals. But for public goods, each user has access to the entire good. For example, you are protected by the entire fire department.

When economists speak of public goods, they usually mean civic goods, those goods and services typically provided by governments, such as parks, streets, and security. Many economists have thought that while private goods can be provided efficiently by a market process, collective goods cannot and require government provision by force. This argument is called "market failure." According to this argument, since all individuals have access to the entire public good, there is no way to make any individual pay for it. People will want to be "free riders."

This argument overlooks the fact that most civic goods service a particular territory. They make the area more desirable, and thus increase its land rent and land value. People located in that space must pay rent or buy land in order to live or work there. This turns the market-failure argument on its head: users are not free riders, since they pay rent; it is the landowners who can be free riders if the good are not paid out of that rent.

The rent can be collected either by a government or by a private community such as a residential association and spent for the collective good. Civic goods then become self-financing, since the rent generated by the good is used to pay for the good. The use of rent also lets us determine the efficient amount of the good to provide. So long as each extra amount of the good increases rent more than it increases the cost, more should be provided until the marginal cost just equals the marginal rent generated.

Some collective goods are not territorial, but are excludable - those not paying for it can be excluded from using it. An example is a club which offers services only to its members. Indeed, the term "club" has become generalized in economics to mean any organization organized for some purpose. Clubs goods can be offered in exchange for membership dues, admissions, and other user fees. If a service becomes crowded, the club or government can also charge a

congestion fee to encourage less usage during peak times (or a discount during non-peak times). An example is a bus or train that charges more during rush hours.

Non-excludable collective goods are those which are not territorial and are available to all who want them. An example is knowledge, once it is published. The market-failure argument is often applied to these public goods. But in fact, many such services are provided voluntarily. People contribute time and money to civic and charitable projects partly for self-centered reasons, such as to be listed as a patron, but mainly from non-mercenary reasons.

As discussed in Chapter 10, Adam Smith observed that people are also motivated by sympathy to others, to communities, and to ideas, and Henry George also discussed this desire for the well being of others and for social approval. People will contribute to a community or to some project when they have sympathy with it. This sympathy can be stimulated by social entrepreneurs who lead communities and movements.

2. Public Finance

Public finance is the branch of economics which is concerned with how governments raise and spend money. Its topics include an analysis of various types of taxes, government debt, budgets, and expenditures.

Taxation and public revenue

A tax is a compulsory payment to a government unrelated to any direct penalty, voluntary service, or debt. Some payments to governments have the form of a tax, as compulsory payments, but not the substance, since the payment is for a service or rent for the use of property. When an oil company pays a lease for offshore oil fields, for example, this is a rental charge for property owned by the government on behalf of the people, so it is not a tax in substance. Likewise, the collection of land rent by a community may be tax in form as a compulsory payment once the land is obtained, but not in substance, since the ownership of land is voluntary and the payment is a rent for land if one agrees it is properly owned by the community.

Taxes can be imposed on two basic types of items: property and transactions. Transaction taxes includes those on sales, value- added, income, gifts, and inheritance. The effect of imposing such arbitrary costs on transactions is to skew the prices of the items taxed, distorting the price signals of a market economy. Sales taxes make goods more expensive, labor taxes make labor more expensive, and taxes on profits make entrepreneurship and enterprise more expensive by reducing profits. Such taxes have the same effect as an increase in the cost of production due to more expensive inputs. Depending on the responsiveness of supply and demand to changes in price, transaction taxes are partly borne by workers as lower real wages, partly by enterprises as lower total profits, and partly by consumers as higher prices and a lower

quantity of goods purchased. Gift taxes punish the free transfer of goods; inheritance taxes punish the preservation of family heritage and the ability to pass on an enterprise to one's children.

Taxes on income and on sales have a similar effect in reducing output, employment, and income. **Taxes on wages**, such as income taxes, impose a "tax wedge" on labor, making it expensive to employers while reducing the net wages of workers. This, especially combined with minimum wages, creates unemployment by making the lowest-quality labor too expensive to hire. **Taxes on sales** also reduce income, since the purpose of production is consumption, and if goods are taxed, purchasing power is reduced. **A "value added" tax** is imposed at each stage of production; for example, when trees are cut down, when lumber is cut, when furniture is made, and when it is sold, each state gets taxed according to the increase in value from one stage to the next. The result is higher prices, lower output, and lower employment.

As Henry George (1883, p. 123) stated,

"We, in fact, treat the man who produces wealth, or accumulates wealth, as though he had done something which public policy calls upon us to discourage."

Employment, enterprise, consumption, production, exchange - all these are social benefits, yet taxation treats these as crimes fit to be punished.

"So, too, if a man saves, out taxes operate to punish him for his thrift" (p. 124).

A difference in taxing income and sales or value added is that income taxes penalize savings, while sales taxes penalize borrowing. When income taxes are applied to savings, they reduce the yield and punish the savor for postponing consumption. When people borrow funds to buy something, a sales tax is applied also to that part of the purchase paid for with borrowed funds. Suppose a car costs $20,000 and the sales tax is 5%. The buyer needs to borrow $1000 extra for the tax, and then pay interest on that $1000. Since people borrow funds and save at different stages of life, and borrowing equals savings, the macro effect of taxes on income and on sales is similar - they hurt business.

Taxes on property fall either on natural resources or on produced goods such as cars and buildings. A tax on a produced good has a similar effect to that on transactions, since a good is the product of transactions. Goods are made more expensive. But a "tax" (in form) or charge or fee on the use of natural resources, such as land, reduces its price. Since it has no cost of production, its supply curve is vertical. The demand is not affected by the charge, so it must be borne entirely by the title holder or owner. For surface land, the formula $p = r / (i+t)$ indicates that the price of land p will be reduced when the tax rate t (as a percentage of the price) is increased, r being the annual rent and i the real interest rate.

Whereas taxes on transactions and produced goods reduce output, a rental charge on land can increase productivity if the land was underused, being held for prestige purposes or in speculation waiting for higher prices. A pollution charge or fee is a type of rent paid for the use of land as a dump, and this charge does increase the price of goods, but this increase is really

compensation for the damage caused by the pollution, so this increase is not an intervention but conforms to a market.

The taxes that most conform to markets and improve rather than decrease productivity are therefore rental charges for the use of natural resources, including surface land, underground resources such as water and minerals and oil, air rights, electro-magnetic (radio wave) frequency rents, and pollution charges.

Government budgets and deficits

Many national governments habitually spend more than they get in taxes and fees because it is politically and personally rewarding to spend money. Taxpayers don't object too much, since the repayment of the debt is pushed into the future, probably to future generations. There have been high annual deficits in the United States, with trillions of dollars in official debt and much more in unfunded liabilities such as pensions and potential insurance claims.

Ideally, a government budget should be split into two parts, one **an operating budget for normal annual expenses**, such as paying the salaries of the military, and the other, **a capital budget for major investments** in capital goods such as a highway or dam. If the capital project makes the economy more productive, then it makes economic sense to borrow the funds to create it, just as enterprises borrow funds to expand productive facilities. In that case, the debt should consist of bonds marked specifically for the project, with a maturity date when the bonds are to be paid back. The total debt would consist of such bonds, thus avoiding generalized indefinite debt.

The operations side of the budget is best funded from current-year revenues, without any debt. As Henry George (1883, p. 162) stated, "The institution of public debts ... rests upon the preposterous assumption that one generation can bind another generation." In a genuine capital budget, the debt is offset by a productive asset that is also being passed on, an asset that yields enough to pay off the debt, hence no real burden is passed on. But debt for current expenses has no corresponding asset value and return.

Of course the resources used in debt-financed operational spending are not physically taken from the future, but from the reduction in current private-sector consumption. The problem is that future persons will have their consumption reduced by the government's forcibly transferring some of their income to those who have previously lent funds to the government. It is therefore better morally and economically to reduce the current private consumption by taxation or assessment, so that present-day government-sector consumption is paid for by the present-day consumers.

There is also a public-choice aspect to a public debt. As George (1883, p. 167) realized, "A great public debt creates a great moneyed interest that wants 'strong government' and fears change." Holders of government bonds become a lobby for the preservation of that debt, as safe treasury bills and bonds become woven deep into the fabric of the financial markets.

Expenditure

Each section of a budget should include both the annual expense and the source of the revenue, so that any new project or agency is accompanied by payment.

Any voluntary association may economically spend funds according to the desires of its members and in accord with its constitution. Spending becomes a problem when the government is not a voluntary association, but is imposed without unanimous consent, at least at the constitutional level of joining a jurisdiction. When revenues are derived from site rents, we can determine the most efficient amount to spend on some collective good or service. A desired territorial good will increase the land rent of the area, so the optimal amount of the good will occur when the marginal or extra rent generated by an extra unit of the good just equals the marginal cost of the extra unit.

Many governments have found that contracting out many of its services results in lower costs than providing it directly. The reason is that competitive firms have an incentive to keep costs at a minimum, whereas with a government monopoly, the civic employees will benefit from high budgets and the government will lack the knowledge if not the incentive to keep the costs low.