

PUBLIC FINANCE

1. Scope of the Field

Public Finance is the branch of economics that studies the taxing and spending activities of government. The term is something of a misnomer, because the fundamental issues are not financial (that is, relating to money). Rather, the key problems relate to the use of real resources. For this reason, some practitioners prefer the label *public sector economics* or simply *public economics*. Public finance encompasses both *positive* and *normative analysis*. Positive analysis deals with issues of cause and effect, for example, “If the government cuts the tax rate on gasoline, what will be the effect on gasoline consumption?” Normative analysis deals with ethical issues, for example, “Is it fairer to tax income or consumption?”

Modern public finance focuses on the microeconomic functions of government, how the government does and should affect the allocation of resources and the distribution of income. For the most part, the macroeconomic functions of government — the use of taxing, spending, and monetary policies to affect the overall level of unemployment and the price level — are covered in other fields.

2. Methodological Basis

Mainstream economic theory provides the framework for public finance. Indeed, it would not be unreasonable to view public finance as just an area of applied microeconomics. As is the case in other fields of economics, the normative framework of public finance is provided by *welfare economics*, the branch of economic theory concerned with the social desirability of alternative economic states.¹ Much of welfare economics focuses on the conditions under which the allocation of resources in an economy is *Pareto-efficient*, defined as an allocation such that the only way to make one person better off is to make another person worse off. Pareto efficiency seems a reasonable normative criterion — if the allocation of resources is not Pareto efficient, it is “wasteful” in the sense that it is possible to make someone better off without hurting anybody else. A stunning result of welfare economics is that if two assumptions are satisfied, then an economy will achieve a Pareto-efficient allocation of resources without any government intervention. The assumptions are: 1) All producers and consumers act as perfect competitors; that is, no one has any market power. 2) A market exists for each and every commodity. In a way, this result formalizes an old insight: When it comes to providing goods and services, free enterprise systems are amazingly productive.

Suppose for the moment that these two assumptions are satisfied. Does the government have any role to play in the economy? Only a very small government that protects property rights and provides law and order would seem appropriate. However, even if an allocation of resources is Pareto-efficient, it may not be socially desirable. A society may be willing to trade some efficiency in return for a fairer distribution of resources among its members (although “fairer” may be hard to define). Hence, even if the economy is Pareto efficient, government intervention may be necessary to achieve a fair distribution of real income.

Furthermore, real world economies may not satisfy the two assumptions required for Pareto efficiency. The first assumption is violated when firms have market power and raise their prices above competitive levels. Monopoly is an extreme example. The issues associated with market power are generally dealt with in the field of Industrial Organization, not Public Finance. The second assumption is violated when markets for certain commodities do not emerge. After all, if a market for a commodity does not exist, then we can hardly expect the market to allocate it efficiently. For example, there is no market for clean air. In effect, individuals can use up clean air (that is, pollute) at a zero price. That particular resource is not used efficiently.

Nonexistence of markets occurs in a variety of situations; each one opens potential opportunities for the government to intervene and improve welfare. In effect, then, the list of market failures provides the public finance agenda.

3. Public Expenditure

The theory of welfare economics focuses our attention on market failure and distributional considerations as reasons for considering governmental intervention. This section illustrates these issues.

3.1. Public Goods

A *public good* has two characteristics. First, once it is provided, the additional cost of another person consuming the good is zero — consumption is *nonrival*. Second, preventing anyone from consuming the good is either very expensive or impossible — consumption is *nonexcludable*. A classic example of a public good is national defense. One person’s consumption of the services provided by the army does nothing to diminish another person’s consumption of the same services. Further, excluding any particular person from the benefits of national defense is all but impossible. In contrast, a private good (such as food) is both rival and excludable.

To see why the market may not provide public goods in efficient amounts, note that, for a private good, the market in effect forces each person to reveal what his true preferences are. If the value of the commodity to a person is greater than or equal to the market price, he buys it; otherwise not. There is no incentive to hide one's true preferences. In contrast, people have incentives to hide their true preferences for public goods. Each person knows that once national defense is provided, he can enjoy its services, whether he pays for them or not. Therefore, he may claim that defense means nothing to him, hoping that he can get a "free ride" after other people pay for it. Everyone has the same incentive, so that defense may not be funded, even though it is in fact beneficial. In short, the market cannot be relied upon to provide a public good in efficient amounts; some kind of collective decision making process may be better (Samuelson, 1954).

While important, this finding does not provide a firm set of guidelines for deciding when the government rather than the private sector should provide some commodity. The result depends in part on whether the public and private sectors pay different amounts for labor and materials, the extent to which the government can address the diversity of tastes for the commodity among the citizenry, and whether or not government provision will have a more favorable (somehow defined) impact on the distribution of real income. Whether public or private provision is better must be decided on a case by case basis. The fact that this can be difficult is reflected in the ongoing political debates in many countries about the merits or *privatization* — taking services that are supplied by the government and turning them over to the private sector.

3.2. Externalities

When the activity of one entity (a person or firm) directly affects the welfare of another in a way that is outside the market mechanism, that effect is called an externality. The classic example is a polluter, who imposes losses on other individuals by degrading the environment. In general, efficiency requires that individuals pay a price for any commodity that reflects its value in alternative uses. But there is no market for (say) clean air. Individuals treat it as if its price is zero, and hence use it in inefficiently large amounts.

There are a number of ways in which government intervention can potentially enhance efficiency in the presence of an externality. 1) It can levy a tax on the externality producing activity. Basically, the tax makes up for the fact that the price being faced by the polluter is too low. 2) It can create a market for the right to pollute. Recall that the fundamental problem is that there is no market for the resource being polluted. In some cases, the government can create

such a market. The government announces it will sell permits to spew a given quantity of some pollutant into the environment. Firms bid for the rights to own these permissions to pollute, and the permissions go to the firms with the highest bids. Again, firms are forced to confront a cost for using up the resource. 3) It can simply order each polluter to reduce pollution by a certain amount. A major problem with such a command-and-control solution is that the reduction in pollution may be greater or less than the efficient amount. That is, the reduction that the government orders may not be the same reduction that would occur if the firm were facing the true price of the resource.

In general, most countries rely on command-and-control mechanisms for dealing with environmental problems. However, in recent years market-oriented approaches have made some inroads. In the United States, for example, there is now an active market in allowances to emit sulfur dioxide into the air. An important area for future research is to see if it is possible to expand the scope of such policies, and to determine whether the efficiency gains that theory predicts actually occur (Stavins, 2002).

3.3. Social Insurance

One way to obtain some protection against the uncertainties of life is to purchase insurance. In private insurance markets, people pay premiums to an insurance company, and receive benefits in the event of certain unlucky occurrences. In addition, a number of government programs also replace income losses that are consequences of events at least partly outside personal control. These programs, collectively referred to as *social insurance*, are among the largest components in the budgets of western governments.

Is there a rationale within conventional welfare economics for such substantial government involvement in insurance markets? There are reasons to believe that private insurance markets will fail to operate efficiently. To see why, note that we can expect an individual who knows he is especially likely to collect benefits to have an especially high demand for insurance, a phenomenon known as *adverse selection*. Due to adverse selection, in order to break even, the insurance company must charge a higher premium for individual coverage than it would if a random group of people were buying insurance. However, these higher premiums exacerbate the adverse selection problem. Only individuals who know they are at great risk will pay the high prices. This, in turn, requires a further increase in premiums, and the pattern continues. The market fails to provide an efficient amount of insurance.² In essence, mandatory social insurance solves this problem by forcing everybody into one big group — the country.