UNIT ONE: STUDYING PUBLIC FINANCE

Readings:
- “Chapter 1: Why Study Public Finance?” in Public Finance and Public Policy by Jonathan Gruber
- “Chapter 1: Introduction” in Public Finance by Harvey Rosen and Ted Gayer

THE FOUR QUESTIONS OF PUBLIC FINANCE

INTRODUCTION:
Public finance is the study of the role of the government in the economy. This study involved the so-called “four questions of public finance,” which are as follows:
1. When should the government intervene in the economy?
2. How might the government intervene?
3. What is the effect of those government interventions on economic outcomes?
4. Why do governments choose to intervene in the way that they do?

Each of these questions will be addressed within this section.

QUESTION #1: WHEN SHOULD THE GOVERNMENT INTERVENE?:
Recall that, in an economy, producers and consumers trade goods and services (typically but not exclusively involving currency). In this dynamic, a trade is deemed efficient when it makes at least one party in some interaction better off without making the other parties worse off. The total efficiency within an economy is maximized when as many efficient trades as possible are made. Put differently, total efficiency is maximized when gains from trade are maximized. In general, competitive market equilibrium is the most efficient outcome for an economy.

In competitive market equilibrium where supply equals demand, all trades valued by both producers and consumers are being made. Any good that consumers value above its cost of production will be produced and consumed, while any good that consumers value at less than their cost of production will not. While competitive market equilibrium is the most efficient outcome for society generally, there are two instances in which the government may wish to intervene: during market failures and for redistribution.

MARKET FAILURE: The first reason that governments may intervene in the economy is due to market failures, during which the market has problems that prevent outcomes that maximize efficiency. This means that there is some phenomenon in the economy that is producing trades that are not efficient and are leaving parties worse off as a result of said trades happening. Market failures often reduce the social efficiency of a market outcome. In instances of market

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1 Public finance: The study of the role of the government in the economy and is (generally) governed by the four questions of public finance
2 Efficient: The property of trade making at least one party better off while not making any party worse off
3 Total efficiency: The efficiency of an entire economy, maximized when the number of efficient trades in an economy are as high as possible
4 Gains from trade: The net benefits to economic agents from being allowed to increase trading with each other
5 Competitive market: A market in which numerous firms produce identical goods
6 Market failures: Problems in the market that cause a market economy to produce outcomes where efficiency is not maximized
7 Social efficiency: The well-being delivered to society from some market outcome
failure, the market achieves competitive equilibrium but with low levels of social efficiency. Thus, the government intervenes to enhance social efficiency.

**REDISTRIBUTION**: Another reason why the government may intervene is for redistribution—the shifting of resources from one group to another. Because redistribution entails taking resources from one group (those deemed to be “too well off”) to another (those deemed “not well off enough”), this necessarily produces efficiency loss, as the group from whom resources were taken may now alter their behavior and prevent the market from realizing its efficiency-maximizing point. However, governments undertake this when they are concerned with the distribution of resources within the economy—or equity. The trade-off between equity and efficiency is appropriately named the equity-efficiency tradeoff.

**QUESTION #2: HOW MIGHT THE GOVERNMENT INTERVENE?:**

**PRICE MECHANISMS**: The first way a government may intervene in an economy is through using price mechanisms, which are policies that change the price of a good. There are two types of price mechanisms:

1. **Taxes**, which raise the price of sale or purchase for goods that are overproduced; and
2. **Subsidies**, which lower the price of sale or purchase for goods that are underproduced.

Price mechanisms are a means of indirectly influencing sales.

**RESTRICTIONS AND MANDATES**: Another way the government may intervene is to directly alter sales through restricting the sale/purchase of goods that are overproduced or mandating the purchase of goods that are underproduced. In the case of mandates, only purchase can be legally required—not sale.

**PUBLIC PROVISION**: Another way the government may intervene is through public provision, where the government directly provides goods to consumers at such a level as to maximize social welfare.

**PUBLIC FINANCING AND PROVISION**: Similar to the previous method, in the event that the government does not want to directly provide the goods in question to consumers, it can provide funds to private entities to provide in its place.

**QUESTION #3: WHAT IS THE EFFECT OF THOSE INTERVENTIONS OF ECONOMIC OUTCOMES?:**

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8 **Redistribution**: The shifting of economic resources from one group to another
9 **Equity**: The degree to which the resources in an economy are equally distributed among groups
10 **Equity-efficiency tradeoff**: The trade-off between equity and efficiency in redistribution policies
11 **Price mechanism**: Government policy that changes the price of a good or service
12 **Taxes**: A price mechanism that raises the price of sale/purchase for goods that are overproduced
13 **Subsidies**: A price mechanism that lowers the price of sale/purchase for goods that are underproduced
14 **Restrictions**: A policy that limits the quantity of overproduced goods that can sold/purchased
15 **Mandates**: A policy that requires consumers to purchase underproduced goods
16 **Public provision**: The practice of the government providing goods to consumers in order to maximize social welfare
Answering the question of what the effects of public finance policy will be requires an evaluation of empirical public finance—the study of public finance that incorporates data and statistical models to analyze the impact of policies of interest. In assessing the effects of government intervention, policy makers must assess the direct effects and the indirect effects.

**DIRECT EFFECTS**: The direct effects of government interventions are those that would be predicted if individuals did not change their behavior in response to said interventions. Put another way, direct effects are the effects an intervention has ceteris paribus.

**INDIRECT EFFECTS**: The indirect effects of government interventions are the effects that emerge because individuals change their response to interventions.

**QUESTION #4: WHY DO GOVERNMENTS CHOOSE TO INTERVENE IN THE WAY THAT THEY DO?**

Governments do not only intervene in the economy because there exists some market failure or need to redistribute resources. Rather, in deciding to intervene, governments must consider the preferences of its constituents. The field of study that analyzes why governments decide to intervene in the economy is known as political economics.

**THE IMPORTANCE OF PUBLIC FINANCE**

**SIZE OF GOVERNMENT**: Since the end of World War II, the United States and a host of other developed countries have seen their federal expenditures as a percentage of its GDP rise rapidly. Among the largest spenders were Greece and Sweden. Studying public finance is important because the level of government spending is often very closely related to its public finance policy.

**DECENTRALIZATION**: A key feature of modern governments is centralization. In decentralized states, local government expenditures comprise a greater percentage of total public spending. By contrast, in centralized states, federal spending makes up the majority of public spending. Public finance is important here as it dictates the centralization of governments.

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17 Empirical public finance: The study of public finance that incorporates data and statistical models to assess the impact of policies of interest
18 Direct effects: The effects of government interventions that are predicted assuming if individuals did not change their behavior in response to the interventions (or ceteris paribus)
19 Indirect effects: The effects of government interventions that occur because individuals change their behavior in response to said interventions
20 Political economics: The field that studies why governments intervene in the economy
21 Centralization: The extent to which spending is concentrated at the federal level and lower levels
SPENDING:
When government spending is less than tax revenue then the government is said to be running a budget surplus, and, conversely, when government spending is greater than tax revenue the government is said to be running a budget deficit. Every dollar spent in a government deficit adds to the government debt. Government debt must be financed by borrowing from domestic citizens, citizens of other states, or other nations. In the United States, with the exception of World War II, the government ran an approximately balanced budget through the 1960s. Through the 1970s and the mid-1990s, the government ran a large deficit. However, this deficit shrank in the last years of the 1990s, eventually growing into a surplus. By the twenty-first century, this surplus had turned back into a deficit during the 2000s. The deficit shrank during the Obama administration but grew again during the Trump administration.

These deficits have also led to the accumulation of debt among OECD countries. As a percentage of GDP, the United States has a slightly above average level of government debt. The most indebted countries, however, are Japan and Italy. While the United States federal government runs large deficits, most state and local governments run balanced budgets.

DISTRIBUTION OF SPENDING:
The distribution of spending has changed over time at both the federal and state/local level in the United States. Much of the spending of the government (at all levels) is concentrated in what are known as public goods, which are goods and services that benefit a wide population beyond the purchaser. In the 1960s, most federal spending was in national defense, but today defense spending has dwindled as a percentage of total spending, offset by spending on Social Security and healthcare programs such as Medicare, Medicaid, and insurance for the disabled. Social Security and these various healthcare programs are collectively known as social insurance programs.

22 Budget surplus: When government spending is less than tax revenue
23 Budget deficit: When government spending exceeds tax revenue
24 Debt: The accumulation of all previous budget deficits that have not been paid off
25 Balanced budget: When tax revenue and government spending are equal, thereby not running a surplus or deficit
26 Public good: Goods for which the investment of any one individual benefits everyone in a larger population
27 Social Security: A government program that provides income to the retired elderly
28 Medicare: A government program that insures the elderly
29 Medicaid: A government program that insures the poor
30 Social insurance program: Government programs designed to address failures in private insurance markets
Social Security, Medicare, and Medicaid also make up what are known as entitlement programs\(^{31}\). In these programs, spending is determined by how many people qualify, rather than some fixed dollar amount. As a result, the government can only change spending by changing the rules of the program.

At the state and local level, most spending is in education and public safety—public goods that make up very little of the federal budget. Like the federal government, however, there has been a shift in spending toward healthcare.

**DISTRIBUTION OF REVENUE SOURCES**

The primary source of revenue for the federal government is the individual income tax\(^{32}\). This makes up half of federal revenues and has remained fairly constant over time. The major shift over time in federal spending is the shrinking revenue from corporate taxes\(^{33}\). Corporate taxes used to make up 25 percent of all federal revenue but currently makes up only 12 percent. There has also been a sizable reduction in excise taxes\(^{34}\). The decrease in these sources of revenue has been offset by a growth in payroll taxes\(^{35}\). Payroll taxes differ from income taxes as income taxes include all sources of income, including returns on savings, while payroll taxes are only levied against earnings from work. Payroll taxes have grown from making up one sixth to one third of all federal revenue.

At the state and local levels, revenues are equally divided among sales tax\(^{36}\), grants-in-aid\(^{37}\), income tax, and property tax\(^{38}\). Over the last forty years, however, property taxes have produced less revenue, requiring offset from increases in grants and income taxes. Property taxes, however, have been criticized as a means of local revenue, as its use means the public services in towns with richer residents are going to be superior to those in a town with poorer residents. This incentivizes people to want to live in towns with residents richer than they are so that they may free-ride off of their taxes. This problem has led to the rise of zoning\(^{39}\) regulations which aim to

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\(^{31}\) **Entitlement programs**: Government programs whose cost is determined by the number of people who qualify

\(^{32}\) **Income tax**: A tax on American individuals’ households

\(^{33}\) **Corporate taxes**: Funds raised by taxing the incomes of businesses

\(^{34}\) **Excise taxes**: Taxes levied on the consumption of specific goods, such as tobacco, alcohol, and gasoline

\(^{35}\) **Payroll taxes**: Taxes on worker earnings that fund social insurance programs

\(^{36}\) **Sales tax**: State and local excise taxes

\(^{37}\) **Grants-in-aid**: Funds given to lower levels of government by federal government

\(^{38}\) **Property tax**: Taxes on the value of individual properties (namely homes)

\(^{39}\) **Zoning**: Restrictions towns place on the use of real estate