

CHAPTER 2: MARKETS AND GOVERNMENT IN A MODERN ECONOMY

“Every individual endeavours to employ his capital so that its produce may be of greatest value. He generally neither intends to promote the public interest, nor knows how much he is promoting it. He intends only his own security, only his own gain. And he is in this led by an invisible hand to promote an end which was no part of his intention. By pursuing his own interest he frequently promotes that of society more effectually than when he really intends to promote it.”

Adam Smith, *The Wealth of Nations* (1776)

SUMMARY

A. What Is a Market?

1. In an economy like the United States, most economic decisions are made in markets, which are mechanisms through which buyers and sellers meet to trade and to determine prices and quantities for goods and services. Adam Smith proclaimed that the *invisible hand* of markets would lead to the optimal economic outcome as individuals pursue their own self-interest. And while markets are far from perfect, they have proved remarkably effective at solving the problems of *what*, *how*, and *for whom*.
2. The market mechanism works as follows to determine the *what* and the *how*: The dollar votes of people affect prices of goods; these prices serve as guides for the amounts of the different goods to be produced. When people demand more of a good, its price will increase and businesses can profit by expanding production of that good. Under perfect competition, a business must find the cheapest method of production, efficiently using labour, land, and other factors; otherwise, it will incur losses and be eliminated from the market.
3. At the same time that the *what* and *how* problems are being resolved by prices, so is the problem of *for whom*. The distribution of income is determined by the ownership of factors of production (land, labour, and capital) and by factor prices. People possessing fertile land or the ability to hit home runs will earn many dollar votes to buy consumer goods. Those without property or with skills, colour, or sex that the market undervalues will receive low incomes.

B. Trade, Money, and Capital

4. As economies develop, they become more specialized. Division of labour allows a task to be broken into a number of smaller chores that can each be mastered and performed more quickly by a single worker. Specialization arises from the increasing tendency to use roundabout methods of production that require many specialized skills. As individuals and countries become increasingly specialized, they tend to concentrate on particular commodities and trade their surplus output for goods produced by others. Voluntary trade, based on specialization, benefits all.
5. Trade in specialized goods and services today relies on money to lubricate its wheels. Money is the universally acceptable medium of exchange – including primarily currency and checking deposits. It is used to pay for everything from apple tarts to

zebra skins. By accepting money, people and nations can specialize in producing a few goods and can then trade them for others; without money, we would waste much time negotiating and bartering.

6. Capital goods – produced inputs such as machinery, structures, and inventories of goods in process – permit roundabout methods of production that add much to a nation's output. These roundabout methods take time and resources to get started and therefore require a temporary sacrifice of present consumption in order to increase future consumption. The rules that define how capital and other assets can be bought, sold, and used are the system of property rights. In no economic system are private-property rights unlimited.

C. The Economic Role of Government

7. Although the market mechanism is an admirable way of producing and allocating goods, sometimes market failures lead to deficiencies in the economic outcomes. The government may step in to correct these failures. Its role in a modern economy is to ensure efficiency, to correct an unfair distribution of income, and to promote economic growth and stability.
8. Markets fail to provide an efficient allocation of resources in the presence of imperfect competition or externalities. Imperfect competition, such as monopoly, produces high prices and low levels of output. To combat these conditions, governments regulate businesses or put legal antitrust constraints on business behaviour. Externalities arise when activities impose costs or bestow benefits that are not paid for in the marketplace. Governments may decide to step in and regulate these spillovers (as it does with air pollution) or provide for *public goods* (as in the case of public health).
9. Markets do not necessarily produce a fair distribution of income; they may spin off unacceptably high inequality of income and consumption. In response, governments can alter the pattern of incomes (the *for whom*) generated by market wages, rents, interest, and dividends. Modern governments use taxation to raise revenues for transfers or income-support programs that place a financial safety net under the needy.
10. Since the development of macroeconomics in the 1930s, the government has undertaken a third role: using fiscal powers (of taxing and spending) and monetary policy (affecting credit and interest rates) to promote long-run economic growth and productivity and to tame the business cycle's excesses of inflation and unemployment. Since 1980, the blend of the mixed economy called the welfare state has been on the defensive in the enduring struggle over the boundary between state and market.

CONCEPTS FOR REVIEW

The Market Mechanism

Market, market mechanism, markets for goods and for factors of production, prices as signals, market equilibrium, perfect and imperfect competition, Adam Smith's invisible-hand doctrine

Features of a Modern Economy

Specialization and division of labour, money, factors of production (land, labour, capital), capital, private property, and property rights

Government's Economic Role

Efficiency, equity, stability, inefficiencies: monopoly and externalities, inequity of incomes under markets, macroeconomic policies: fiscal and monetary policies, stabilization and growth

FURTHER READING AND INTERNET WEBSITES

Further Reading

A useful discussion of globalization is contained in "Symposium on Globalization in Perspective," *Journal of Economic Perspectives*, Fall 1998.

For examples of the writings of libertarian economists, see Milton Friedman, *Capitalism and Freedom*, and Friedrich Hayek, *The Road to Serfdom*.

A strong defence of government interventions is found in a history of the 1990s by Nobel Prize winner and Clinton adviser Joseph E. Stiglitz, *The Roaring Nineties: A New History of the World's Most Prosperous Decade*. Paul Krugman's columns in *The New York Times* are a guide to current economic issues from the perspective of one of America's most distinguished economists; his most recent book, *The Great Unravelling: Losing Our Way in the New Century*, collects his columns from the early 2000s.

A fascinating example of how a small economy is organized without money is found in R.A. Radford, "The Economic Organization of a P.O.W. Camp," *Economica*, vol. 12, November 1945, pp.189-201.

Websites

You can explore recent analyses of the economy along with a discussion of major economic policy issues in the *Economic Report of the President* at <http://www.gpo.gov/fdsys/browse/collection.action?collectionCode=ERP> See www.whitehouse.gov for federal budget information and as an entry point into the useful Economic Statistics Briefing Room.

Major issues are presented from a conservative or libertarian economic perspective at the website of the Cato Institute, www.cato.org

QUESTIONS FOR DISCUSSION

1. **What determines the composition of national output? In some cases, we say that there is “consumer sovereignty”, meaning that consumers decide how to spend their incomes on the basis of their tastes and market prices. In other cases, decisions are made by political choices of legislatures. Consider the following examples: transportation, education, police, energy efficiency of appliances, health-care coverage, television advertising. For each, describe whether the allocation is by consumer sovereignty or by political decision. Would you change the method of allocation for any of these goods?**

Transportation: is allocated by both consumer sovereignty and political decision. In the case of cars and bikes, it is the market mechanism that allocates vehicle ownership (although of course, some income of some people may come through income-support or transfer programs). However, the building of roads, and the decision of their route and size, is usually a political decision; and their use is then ‘free’.

However, there is public transport available, such as buses and trains, which are often heavily subsidised by government. Elderly citizens are given free bus passes, which is allocation by political decision. The unemployed may get their bus fares to job interviews paid for.

I think that a good transportation system is a public good, and so should be primarily paid for publicly. I think there is a role for road pricing – but the revenues could go to government rather through private tolls.

Education: is largely allocated by political decision. Primary and secondary schooling is provided to all citizens, funded by general taxation. A minority, however, choose to buy private education as a consumer (on top of taxes). With post-secondary education, consumer sovereignty takes a greater role, as Universities can charge fees - although these fees are often paid by government loans.

Education is a public good, and it would be unfair that poorer families could not send their children to school. So it should be allocated universally by political decision. I think it is right that Universities are allocated more by market mechanism as not everyone will need to go, and the graduates should benefit from their education by higher earnings in their lifetime.

Police: are funded publicly, although some functions may be bought from the private sector.

Policing is a public good, we all benefit from it, and so should be allocated by political decision.

Energy efficiency of appliances: is allocated largely by consumer sovereignty but with some political decision. Government provides incentives for increased energy efficiency and can promote standards. Consumers still have a wide choice of appliances, and can choose to buy more or less efficient appliances with their incomes as their tastes and available technology allows.

It is right that appliances are decided by consumer sovereignty. However, I think where energy usage creates negative externalities, such as pollution and climate change, the government should intervene in regulation and in creating pollution permits.

Health-care coverage: is allocated by political decision. All citizens can receive treatment on the National Health Service. The treatments available are decided by political decision, and if not offered must be bought privately. Pharmaceuticals must be purchased, but with subsidies for many (such as the unemployed and the elderly).

I think it is right that health-care coverage is universal and allocated by political decision. It would be unfair that poorer families would not have access to health-care.

Television advertising: is allocated by consumer sovereignty. The amount of people watching certain programmes provides the demand. There is some regulation on advertising, for instance, the adverts must be suitable for the audience; so adverts with adult content should not be put on during the day. Also, political advertisements can't be bought privately, rather political party broadcasts are allocated by political decision.

It is right that television advertising is largely allocated by the market mechanism. But I accept the case for some regulation.

2. When a good is limited, some means must be found to ration the scarce commodity. Some examples of rationing devices are auctions, ration coupons, and first-come, first-served systems. What are the strengths and weaknesses of each? Explain carefully in what sense a market mechanism "ration" scarce goods and services.

Auctions: are similar to a market mechanism, in that the dollar votes of people determine the price at which goods are sold. If an item is desired by many people, then each bidder will have to increase their bidding price to outbid their rivals. The good is eventually sold to the highest bidder, that person who shows they value the good most by paying the highest price. The goods should be allocated efficiently to those who most want them.

The disadvantage is similar to the market mechanism in that those with high incomes will be able to outbid those with low incomes, which might seem inequitable.

Ration coupons: may have the advantage that they could be distributed more equitably than market incomes.

Their disadvantage is that, unlike market mechanisms, they take no account of people's dollar votes. They will be allocated by some non-market mechanism, and so may not match supply and demand, and so allocate the goods or service inefficiently. For instance, the coupons may not be sufficiently scarce to reflect the good's scarcity, so consumers may not use the good efficiently and producers will not be given the signal and incentive to produce more.

First-come, first-served: has the advantage of simplicity.

Its disadvantage is that goods may not go to those who value it most.

The market mechanism “ration” scarce goods and services as follows. If a good is scarce, that is if the demand is higher than the supply of the good, then its price will be high. If the price is high, then consumers will buy less of the good, and substitute cheaper (less scarce) goods for it. Those who most value the good (represented by those willing to pay the high price) will buy it.

- 3. This chapter discusses many “market failures”, areas in which the invisible hand guides the economy poorly, and describes the role of government. Is it possible that there are, as well, “government failures”, government attempts to curb market failures that are worse than the original market failures? Think of some examples of government failures. Give some examples in which government failures are so bad that it is better to live with the market failures than try to correct them.**

Government failures worse than the market failures they are designed to correct do exist.

Here are some examples of market failures, the government interventions to correct the market failures, and the subsequent government failure:

- A market failure may be the inability for many people to earn a living wage. That is, the labour that people are willing to supply is not highly demanded, and will only be bought at a low price. The government may then correct for this by setting a minimum wage. Employers may then think that the minimum wage is too high a price to pay for some peoples’ labour, and either will not employ them at all, or employ them for a shorter time than they would otherwise.
- A market failure may be high unemployment. The government may intervene by offering unemployment benefits. The government failure may be that some choose to stay on unemployment benefits rather than look for work or start a business.
- A market failure might be the noise pollution that an airport creates. The government intervention may then be to regulate the size of the airport and limit the number of flights. This might lead to the government failure that the transport links are poor, and the area can no longer attract the workers and goods that it could otherwise, leaving the area less rich than it could be.
- A market failure is that the building of houses may impose costs, in terms of increased congestion and worse views, on neighbours. The government intervention may be strict planning laws that restrict where houses can be built. The government failure may be that houses are scarce as a result and are more expensive. This may lead to homelessness, reduced expenditure on non-housing goods and services, low labour mobility and high government housing subsidies.
- A market failure may be bank runs. The government intervention may then be deposit insurance and bank bail-outs in case of failure. The government failure is then that banks are protected from the consequences of their own actions, and take on increased risk.

In all of these cases, it is hard to tell which is worse, the market or the government failure. One market failure that is worth keeping is the tendency for market mechanisms to make whole industries obsolete due to changes in tastes and technology (although this 'failure' is a feature, not a bug; and is really a success of the market). No doubt it was distressing for drivers of horse-drawn carriages when trains and cars were created. They would have lost their livelihood through no fault of their own. But if government had stepped in to prevent the use of new technology, we'd all be worse off.

- 4. Consider the following cases of government intervention: regulations to limit air pollution, income support for the poor, and price regulation of a telephone monopoly. For each case, (a) explain the market failure, (b) describe a government intervention to treat the problem, and (c) explain how "government failure" (see the definition in question 3) might arise because of the intervention.**

Regulations to limit air pollution

- a. When we drive our cars, or take an aeroplane, we pay for the costs of the journey. However, in polluting the air we impose costs on others that we do not bear in the market price of the journey. This is a negative externality or spillover that the market fails to account for.
- b. The government could then set high standards for emissions of cars and planes and other polluting activities such as factories.
- c. The cost of meeting these higher standards in terms of redesigning cars and planes and factories will be higher now. This cost will ensure that less cars, planes and factories will be used, which will reduce the efficiency of the economy.

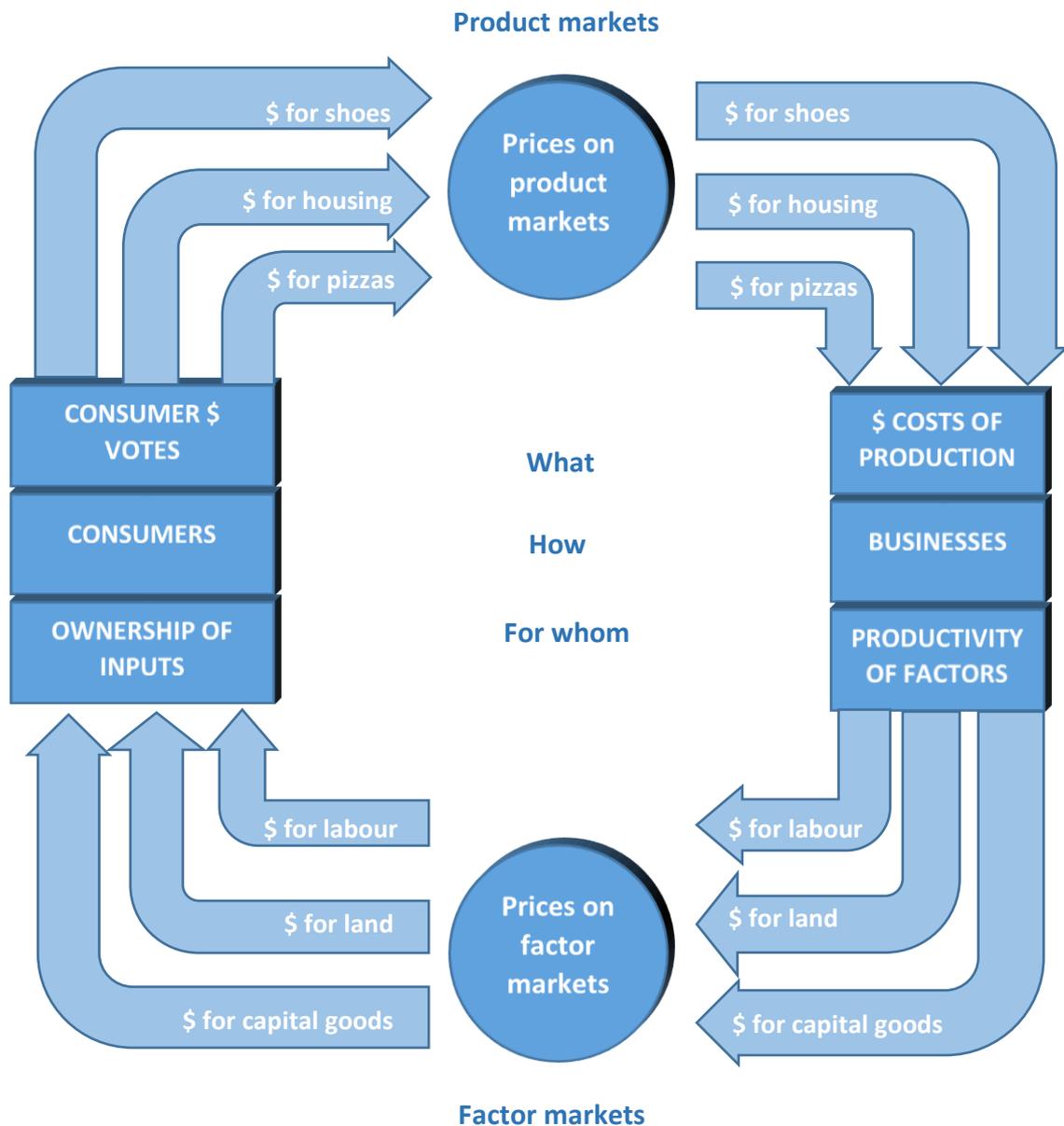
Income Support for the Poor

- a. The employment market can be thought of as the market for factors of production. Each person is selling their labour, and employers will want to buy labour to produce their output. If a person has skills that there is little demand for, or their skin colour or sex causes them to be undervalued, the price that causes market equilibrium of supply and demand will be low – in layman's terms, the wages will be low.
- b. Government may create an income support program, whereby taxes are levied on companies and higher earners and this money transferred to low income workers.
- c. The government failure will be that the taxes on companies cause them to take on less workers and taxes on higher earners may cause them to work less.

Price Regulation of a Telephone Monopoly

- a. The market failure is that there is imperfect competition – a monopoly in fact – in a local telephone market. Due to the lack of competition, the telephone company is not under pressure to use the most cost-effective methods and so it charges its customers higher prices.
- b. The government intervention may be to regulate prices that the telephone monopoly can charge its customers.

- c. The government failure may be that the telephone monopoly is not able to increase supply in line with rising demand, as prices are not allowed to rise sufficiently to signal this.
5. The circular flow of goods and inputs illustrated in Figure 2-1 has a corresponding flow of dollar incomes and spending. Draw a circular-flow diagram for the dollar flows in the economy, and compare it with the circular flow of goods and inputs. What is the role of money in the dollar circuit flow?



The dollar flow of dollar incomes and spending goes in the opposite direction to the circular flow of goods and inputs. That is, consumers pay dollars for the shoes, housing and pizzas they buy from businesses. Similarly, businesses pay dollars for the land, labour and capital goods that consumers can provide them.

The role of money in the dollar circular flow is as a medium of exchange. In the absence of money, trade would require barter. If you wanted to buy a pizza, you would have to find something that the seller of the pizza values exactly as much as a pizza. This would be very difficult and time consuming. With money, you need to find an amount of money that represents how much both you and the seller value that pizza, but money could also be used to value a house or a haircut. Money is universally accepted, greatly facilitating trade.

6. Give three examples of specialization and division of labour. In what areas are you and your friends thinking of specializing? What might be the perils of overspecialization?

1. In making the laptop I'm typing this document on, some people designed the case, others built the screen, some built the keys on the keyboard, others designed the graphics card, some tested the sound card, and so on and so on. Indeed, there will be hundreds of different parts that were designed and built and delivered and assembled by many different people, who may never have once spoken to one another.
2. In a warship, some will steer it, some will man the guns, others will work on communicating with command, some will provide medical support, some will give commands, some will obey them etc.
3. In a hospital, some will be stroke specialists, some heart surgeons, some brain surgeons, some will take X-Rays, some will take blood samples etc.

I could perhaps specialise in writing Java programs to analyse economic numbers. The danger might be that some other computer programming language comes along, so that no one uses Java anymore. The time I'd invested in learning Java would be wasted and I'd need to retrain.

A friend could specialise in becoming a taxi driver. Driverless cars could become widespread and that skill would be redundant.

Another friend could specialise to become a book publisher. The popularity of e-readers like the Kindle could reduce demand for printed books, and hence for book publishers.

In both cases, time is invested in acquiring skills and employment that become obsolete due to changing technologies.

Another peril of overspecialisation is that people can only 'see' a small part of a process, product or service. It might become harder for people 'seeing' different parts to be able to understand and communicate with one another. It might be harder for a manager, who needs to 'see' the big picture, to understand all the different parts they are responsible for. For example, the people working on designing the software for this laptop may find it harder to understand the hardware it needs to work on.

7. “Lincoln freed the slaves. With one pen stroke he destroyed much of the capital the South had accumulated over the years.” Comment.

This is incorrect, as it is a misunderstanding of capital. If capital is a produced input – machinery, roads etc. – then a person is not a capital good. A person is a provider of labour – human time spent on production. Lincoln merely exchanged one way of purchasing labour – buying someone for life – for another – renting their labour at a wage. In fact this would be more efficient, as the worker can sell their labour for the highest wage i.e. where they would be most valued and most productive. They could then choose to specialize in a certain area, making the most of their skills.

The US Civil War proved that the industrial society of the North, relying on specialization, division of labour and capital goods, had the economic power to defeat the agrarian, slaving society of the South, which relied on the inefficient use of labour.

8. The table below shows some of the major expenditures of the federal government. Explain how each one relates to the economic role of government.

Major Expenditure Categories for Federal Government

Budget category	Federal spending, 2005 (\$, billion)
Health care and Medicare	547
Social security	515
National defence	451
Income security	348
Interest on public debt	178
Natural resources and environment	31
International affairs	38

Source: Office of Management and Budget, *budget of the United States, Fiscal Year 2005*.

Health care and Medicare: is very different in the US than it is in the UK, although changing. Much health care is allocated by “consumer sovereignty”, although there are government subsidies for the needy and elderly. This deals with the issue of *equity* – that the electorate would find it unfair if people were denied access to health care if they hadn’t the market incomes.

Social security: is a response, again, to concerns over *equity*. The electorate may not always believe that market incomes are fair. The elderly may not have the incomes to support a standard of living considered acceptable, and so some transfer payments should benefit them. Similarly, periods of unemployment among those of working age may not be voluntary, but due to changing demand for certain skills or macroeconomic instability or brute bad luck. The electorate feels it unfair that people’s income should fall too far because of this.

National defence: is a *public good*. We all benefit when a nation can prevent foreign combatants or terrorists from invading its territory, killing its citizens, denying it its land and destroying capital goods. It is a *positive externality*, in that everyone benefits from it but it makes little sense for an individual to provide it in sufficient quantities. The

government uses its dollar votes to provide the service in quantities decided by political decision.

Income security: is provided over concerns of *equity*. The market may well provide low incomes for some, and the electorate believes that a decent minimum standard of living for workers should be provided.

Interest on public debt: is just a consequence of government having to borrow as its income is less than its expenditure. Public debt will be driven by government's expenditures and income, which will be determined by government's activities, which may be justified by any of the economic responsibilities of government.

Natural resources and environment: will be driven mainly by concerns over *externalities*. A poor natural environment is a *negative externality*. We do not pay for the costs we impose on the environment in terms of the pollution generated by market activities, and so will oversupply that pollution unless it is regulated or the cost is paid for through taxes or pollution permits.

It may also be an *efficiency* concern. We saw in Chapter 1 that natural resource depletion will cause a shift inwards of the *production-possibility frontier (PPF)*. If we use natural resources more efficiently and sustainably we can improve the long-run efficiency of the economy.

International affairs: is driven by concerns over *externalities* and *macroeconomic growth and stability*. A peaceful and stable international environment is a *public good*. Diplomacy and aid can prevent disruptions from war and terrorism, and may allow society to divert less of its economic resources to military spending.

Similarly, *macroeconomic growth and stability* may depend on good international institutions for providing property rights, justice and finance, and also on a favourable trade regime. To paraphrase John Donne, "No economy is an island, Entire of itself". When you can trade freely and fairly with other nations, your economy will benefit.

9. **Why does the saying "No taxation without representation" make sense for public goods but not private goods? Explain the mechanisms by which individuals can "protest" against (a) taxes that are thought excessive to pay for defence spending, (b) tolls that are thought excessive to pay for a bridge, and (c) prices that are thought excessive for an airline flight from New York to Miami.**

Taxes are the "price" paid for public goods. Unlike prices in the market, they are not voluntary – government compels you to pay them. Because they are not voluntary, people will only consent to pay for them if they have a say in how high taxes should be, from whom they should be collected and how they are spent. This is the reason for the phrase "No taxation without representation" – we want our views represented when government charges us for taxes and spends them on our behalf.

The phrase would not make sense for private goods, as their price is faced by us alone and we can choose whether to pay it or not. There is a very direct, individual connection between spending and consumption. We fully represent ourselves when we make those

spending and consumption decisions. (*– Maybe spending could be done as a family, and it is up for the members of the family to decide how to spend money and who should pay for what; but the individual will still have more say and oversight than the average voter.*) Either way the price is not a “tax” for private goods, and as paying it is not such a collective action there is less need for “representation”.

There are ways to protest against taxes and prices that are too high.

- a. The individual can protest against high taxes for defence spending by voting for a representative, or a governing party, that promises to reduce taxes and defence spending. They can also advocate lower taxes and defence spending and persuade fellow citizens to pursue this. That is, people can use the democratic process to make the political choice for lower taxes and lower defence spending.

More controversially, they could reduce their taxes by avoidance and evasion.

- b. The individual can protest about high tolls on a bridge by choosing an alternative route or method of transport that allows them to avoid using the bridge.
- c. The individual can protest against the high price of an airline flight by choosing an alternative method of transport, such as driving or taking a coach or train. They could shop around for competing airlines to get a lower price.