

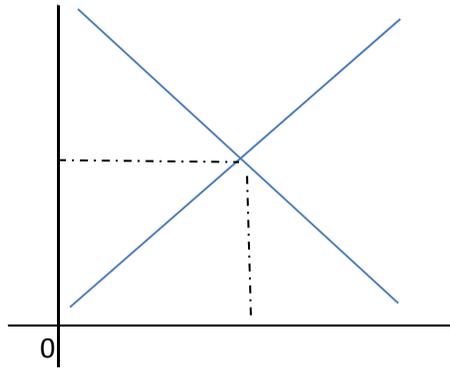
FE431: Public Finance Course Notes

Part II: Market Failure and Government Failure

I. Market Failure - Introduction

- “Unnecessary”¹ government intervention may hinder markets from achieving efficient outcomes.

Examples²:



¹ Unnecessary from an efficiency standpoint. Though government intervention could be advocated for other (usually equity) reasons.

² For example, the Roosevelt Administration imposed restrictions on wage *increases* to control inflation during WWII. To attract workers, many firms began offering additional non-cash benefits (such as health insurance, pensions, and paid holidays and vacation time).

- Otherwise, if we accept the basic premise of the First FTWE, then we can say that *free* markets may *fail* to allocate resources efficiently if:

1. *There is* _____.

2. *There are* _____. *Examples of these last problems include:*

a.

b.

II. Market Failure – Imperfect Competition

- *Imperfect competition* (a.k.a. “market power” by individual firms) may hinder free markets from achieving efficient outcomes.

“Where competition is free, the rivalry of competitors, who are all endeavouring to jostle one another out of employment, obliges every man to endeavor to execute his work with a certain degree of exactness.”

- Adam Smith, *The Wealth of Nations* (Book V), 1776

“People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices.”

- Adam Smith, *The Wealth of Nations* (Book I), 1776

However, he also later noted:

“In a free trade, an effectual combination cannot be established but by the unanimous consent of every single trader, and it cannot last longer than every single trader continues of the same mind.”

- Adam Smith, *The Wealth of Nations* (Book I), 1776

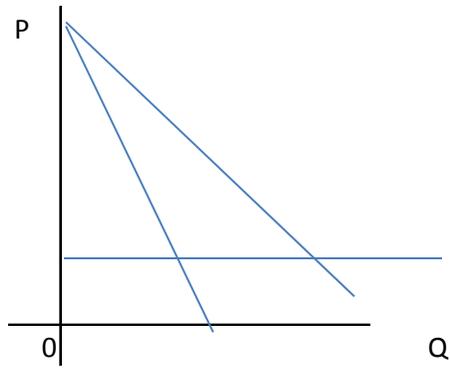
Example:

- Suppose the market demand for bottled water is

where P is the price per bottle and Q_d is the quantity demanded (in 1000's per day)

- Suppose there are no fixed costs and constant marginal costs of $MC = \underline{\hspace{2cm}}$ per bottle
- In a *perfectly competitive* market we'd expect

- A *single-price monopolist* would choose



- *Possible government policies towards excessive market power:*

1.

2.

3.

4.

III. Market Failure – Externalities and (other property rights problems)

- A great ideological battle exists between the “Pigou Club” and the “Coase Club” on the role of government in addressing the potential inefficiencies arising from free markets in the case of *externalities* and other property rights problems. Recall Smith’s “invisible hand” reference:

“...he intends only his own gain, and he is, in this and many other cases, 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 the society more effectually than when he really intends to promote it.”

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

Pigou’s criticism of Smith:

“No ‘invisible hand’ can be relied on to produce a good arrangement of the whole from a combination of separate treatments of the parts. It is therefore necessary that **an authority of wider reach should intervene** to tackle the collective problems of beauty, of air, and light...”

- A.C. Pigou, *The Economics of Welfare* (1920)

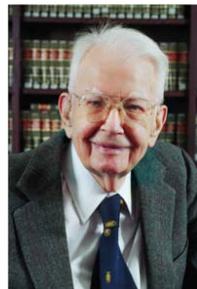


Arthur Cecil Pigou (1877-1959)

Coase’s caution to Pigou:

“There is no reason to suppose that the restrictive and zoning regulations, made by a fallible administration subject to political pressures and operating without any competitive check, will necessarily always be those which increase the efficiency with which the economic system operates.”

- Ronald Coase, “The Problem of Social Cost”, (1960)

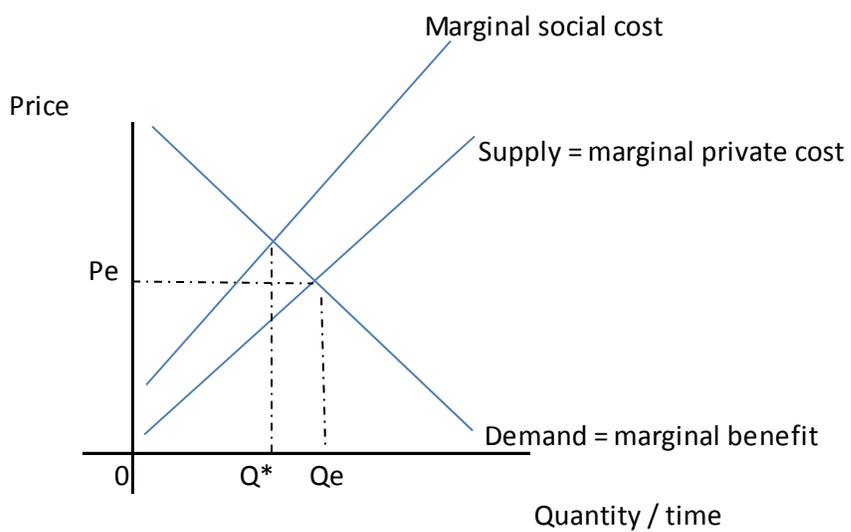


Ronald Coase (1910-)

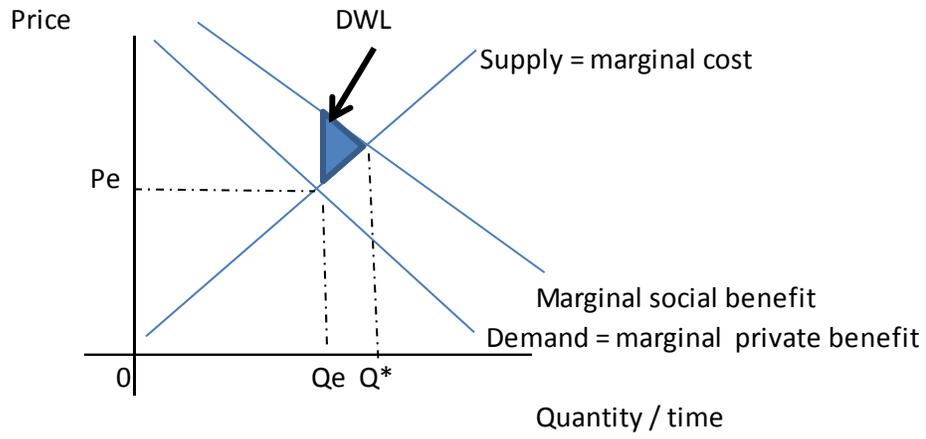
A. Pigou's Argument

- An externality occurs when no market mechanism exists to make participants in an activity (e.g. producers or consumers of a good) pay for a cost (a *negative externality*) incurred on third parties, or to make third parties pay for a benefit (a *positive externality*) they receive.

Negative Externality – gasoline consumption?



Positive Externality – owner occupied housing?



B. Coase's Argument

- Coase Theorem: If **property rights** are clearly defined (and enforced), the efficient outcome should emerge *without government intervention*⁴ and *regardless of which side has the initial property right*, provided _____.

Examples:

⁴ Coase recognized the importance of the courts in determining property rights / liability for damages, and for government to protect property rights, as it must do, in general, for free markets to function. He just argued that further government action (e.g. taxes, regulation, etc) was not necessarily needed for efficiency if the involved parties were free to bargain with each other over the activity or outcome in question.

- The “holdout problem” (or “anti-commons” problem) provides a significant barrier to efficiency through Coasian bargaining when many independent parties are involved (a high “transactions cost” problem):

“The navigation of the Danube is of very little use to the different states of Bavaria, Austria, and Hungary, in comparison of what it would be if any of them possessed the whole of its course till it falls into the Black Sea.”

- Adam Smith, *The Wealth of Nations* (Book I), 1776

Examples:

1. Land-assembly →

2. Many pollution / negative externality problems →

Perhaps the greatest “holdout” ever (a Chinese “nails house”):



The “Kelo” house (from *Kelo vs. New London* (2005)⁵):



⁵ The U.S. Supreme Court ruled (5-4) that the city of New London was within its constitutional rights to use eminent domain to seize the Kelo’s house (and others) and sell the property to the Pfizer Corp because this was “public use”. The Court stated that cities and states must define what legally constitutes “public use”. The Court cannot. Several cities are currently considering using eminent domain to seize homes with “underwater mortgages”, pay *the banks* fair market value, and sell the homes back to the homeowners at fair market value. The “public use” is to stem the foreclosure crisis and its adverse effects on property values and tax revenues.

C. Common-property and open-access resources

⇒

⇒

⇒



Garrett Hardin (1915-2003)

⇒



Elinor Ostrom (1933 - 2012)

⇒

⇒ Other governmental solutions if collective action is insufficient:

D. Summary of approaches to externality and common-property resource problems:

Non-governmental (free market) approaches

1. Moral suasion

⇒

2. Establish property rights – Coase Theorem

⇒ Coase was concerned that government “solutions” involve risks, costs (often higher than expected) and introduce special interests, so there is no guarantee of the desired outcome.

⇒ In his Nobel Prize acceptance speech (1991), Coase was critical of “blackboard economics”, which is essentially what we are doing by advocating a simple Pigovian tax or subsidy to “fix” the externality problem.

⇒ Property rights may arise as the result of private collective action

Governmental approaches

3. Direct government activity to mitigate the damage from the externality

⇒

4. Pigovian tax or subsidy; pollution permits / “cap and trade”

- *Double-dividend hypothesis:*

⇒

⇒

5. Government regulation (e.g. laws prohibiting certain activities or requiring people / firms to take a particular action)

- Strong evidence exists that more “market-oriented” approaches to negative externalities (e.g. taxes, subsidies, permit systems) can achieve a desired outcome and lower cost to society than government regulation. Why?

Example: What would be the least costly way for the country to reduce gasoline consumption?

IV. Market Failure – Public Goods

- Free markets tend to produce too little of goods with positive externalities (because providers cannot charge everyone who benefits)
- Free markets may not produce pure public goods at all (because they are non-excludable, so people can't be forced to voluntarily pay, many would free ride, and the provider would not be able to collect enough to cover the costs of provision).
- Government may need to provide pure public goods, determine the appropriate level of provision (through voting or other means), and finance provision with taxes.
- Recall our definition of “public goods”:

		Excludable	
		Yes	No
Rival	Yes	<i>Pure Private Goods</i>	<i>Common Property or Open Access Resources</i>
	No	<u>Excludable Public Goods</u>	<u>Pure Public Goods</u>

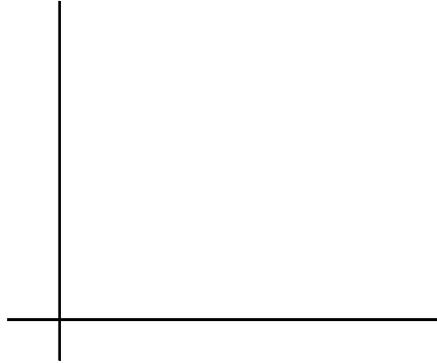
A. Excludable Public Goods

“It is unjust that the whole society should contribute towards an expense of which the benefit is confined to a part of the society.”

V. Adam Smith, *The Wealth of Nations*
(Book V)

- Smith’s argument above reflects the “benefit principle” in taxation →
- Consider an excludable public good (i.e. excludable, but non-rival). Non-rival implies that *once provided*, the marginal cost MC = ____ for one more person to use / benefit from the good.

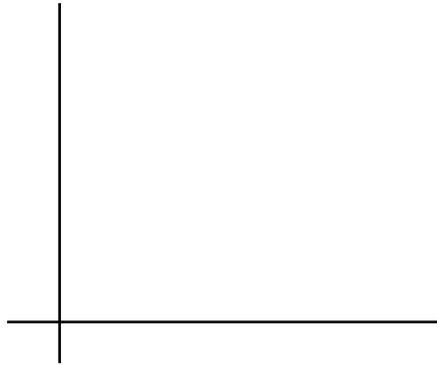
Example:



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- If congestion is a concern, then



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- *“Peak-load pricing” is the practice of*

“Where there is no property, or at least none that exceeds the value of two or three days labour, civil government is not so necessary...Civil government, so far as it is instituted for the security of property, is in reality instituted for the defence of the rich against the poor, or of those who have some property against those who have not at all.”

- Adam Smith, *Wealth of Nations*
(Book V)

- Unlike in markets for private goods, individuals would all consume the same quantity of public goods, but pay different prices (in a Lindahl Equilibrium)
- The only problem with the Lindahl Equilibrium is

⇒ *Free market*⁷

⇒ *Government provision*⁸

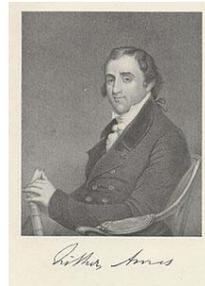
- Note that some pure public goods are provided by the private sector through voluntary contributions and philanthropic organizations (e.g. environmental / wildlife conservation and habitat, some music and arts)
- However, the non-excludability and free-rider problems mean that for most pure public goods, free market provision is likely to be well below the efficient quantity. The traditional solution has been
- Inevitably, the level of provision of public goods and the methods of financing them are determined through the _____

⁷ Economists have tried to design many different “mechanisms” that would result in efficient public good provision without coercive taxation, but with little practical success.

⁸ Some use of “contingent valuation” surveys and other methods to determine individual and community demands for public goods.

VI. Public Goods and Public Decisions

“Monarchy is like a sleek craft, it sails along well until some bumbling captain runs it into the rocks; democracy, on the other hand, is like a raft. It never goes down but, dammit, your feet are always wet.”

Fisher Ames⁹ (1758-1808)

- A benevolent dictator could (try to) provide the efficient quantity of public goods, and (try to) charge each person their Lindahl Price.
- Some reasons why the actual level of public goods provision may differ from the efficient outcome:
 - 1.
 - 2.

Example:



⁹ From Massachusetts. U.S. House of Representatives 1789 – 1797.

If some voters have “double-peaked” preferences, a Condorcet winner may not exist,



Hotelling's Hot Dog Vendors

3. Representative democracy → *if (1) people vote for the candidate whose policy maximizes their utility, and (2) candidates honestly announce their policies in order to maximize votes, and (3) candidates, if chosen, implement their announced policies, then outcomes again should reflect the*



Harold Hotelling (1895-1973)

President George Washington's¹⁰ warning about the dangers of **political parties**:

“However combinations or associations of the above description may now and then answer popular ends, they are likely, in the course of time and things, to become potent engines, by which cunning, ambitious, and unprincipled men will be enabled to subvert the power of the people, and to usurp for themselves the reins of government; destroying afterwards the very engines, which have lifted them to unjust dominion.”

- George Washington's Farewell Address to the People of the United States, 1796

¹⁰ George Washington was the only U.S. president who did not belong to a political party.

“The nine most terrifying words in the English language are, ‘I’m from the government and I’m here to help.’”

and

“When you get into bed with government, you're going to get up with more than just a good night's sleep.”

- President Ronald Reagan



Ronald Reagan (1911-2004)

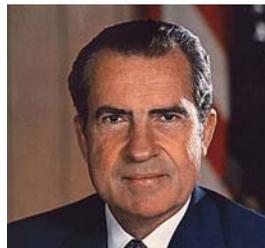
4. Bureaucracy → *government bureaucrats may end up maximizing their agency's size / budget rather than providing the efficient level of the agency's good or service, or providing it in a cost-effective manner (the “black hole” problem) → William Niskanen's Bureaucracy and Public Economics (1994)*



William Niskanen (1933 -)

“Any change is resisted because bureaucrats have a vested interest in the chaos in which they exist.”

- President Richard Nixon



Richard Nixon (1913-1994)

5. Special interest groups →

“In the government sphere, as in the market, there seems to be an invisible hand, but operates in precisely the opposite direction from Adam Smith’s: an individual who intends only to serve the public interest by fostering government intervention is led by an invisible hand to promote private interests, which was no part of his intention.”

- Milton Friedman, *Free to Choose* (1980)



Milton Friedman (1912 – 2006)

Mancur Olson, *The Rise and Decline of Nations* (1982) → In a stable democracy, special interests become better organized and more influential over time, leading to policies that favor them at the expense of the general public.

Results in misallocation of resources (e.g. greater involuntary unemployment due to “sticky wages” caused by labor unions), slower adoption of new technology, increased bureaucracy, and lower economic growth.



Mancur Olson (1932-1998)

6. Debt financing →

“Every new tax is immediately felt more or less by the people. It occasions always some murmur, and meets with some opposition... To borrow... is always an obvious and easy expedient for getting out of the present difficulty.”

- Adam Smith, *Wealth of Nations* (Book V)

“Were the expense of war to be defrayed always by revenue raised within the year... wars would in general be more speedily concluded, and less wantonly undertaken.”

- Adam Smith, *Wealth of Nations* (Book V)

Joseph Tainter, *The Collapse of Complex Societies* (1988), argues that the Roman Empire became too burdened with complex, expensive, non-productive layers of bureaucracy that were intended to solve social and economic problems, but which became too costly for the rest of the population to adequately support. He referred to “diminishing returns on investments in social complexity.”¹¹

⇒ 10 of the 20 wealthiest counties in the U.S. (and the top three) are all in one small geographic location. Where?

¹¹ See <http://realestate.yahoo.com/promo/meet-americas-richest-counties.html> for discussion of why most of the wealthiest counties in the U.S. are in the _____ area.

- Inevitably, some groups of consumers will be dissatisfied with the level of government provision of some public goods and services.
- Non-profit organizations (NPOs) provide a means for dissatisfied people to

Examples:

⇒ Government failure theory →

⇒ Contract failure theory →

“When we give what we can and give it with joy, we don't just renew the American tradition of giving, we also renew ourselves.”



Bill Clinton (1946 -)