

Markets versus Governmental Regulation

Our earlier historical treatment of government and the economy should have produced the understanding that the market economy is not the only means of allocating the scarce goods and resources of society.

Indeed, in order for exchange and accumulation to occur in the first place, it was necessary for government to exist and establish the parameters of exchange.

Indeed, market allocation systems such as we have today were preceded by other types of allocation systems.

Allocation by Tradition

Allocation by Hierarchy

Combinations of Tradition and Hierarchy

Market dominant allocation systems developed in the late 18th and 19 Centuries

We can view the method of allocating scarce resources of a society as evolving through time. It has been a social learning process.

Prior to the development of nation-states there was only the community, either clans, tribes, or other local units.

Nation states evolved over time. The claim to power was often religious. Prior to the 18th century the only large organizations were the church and the state. The church and the state discouraged the development of large organizations that would compete for power.

Guilds developed in medieval and renaissance Europe which were decentralized sources of power. This gave the lower classes an edge and fostered the accumulation of money to produce a quasi-middle class. However, conditions were pretty stark even up until the 19th century.

Power centers in Europe and elsewhere continued to discourage the development of large organizations that would compete for power. However, a weak national government in the U.S. was unable or unwilling to discourage the development of large organizations.

At the beginning of the 19th century most exchange was local and most production was agricultural. Most production was for home consumption; what little surplus there was was sold in market towns.

Elites in the American colonies turned states could only grow in economic power by developing large economic organizations to support their desire to accumulate surplus and extract resources from society. They kept government weak through most of the 19th century to enable the development of economic power, which not coincidentally resulted in economic power.

By the latter part of the 19th century the economy had become less communal and more hierarchical.

There were no companies employing more than 1000 employees in 1787. Now that is the dominant mode of employment.

Where in 1787 there was very little wage labor, in 2008 virtually everyone works in wage labor.

What has been dubbed by sociologists as “wage slavery” evolved.

In the 18th and 19th centuries the idea of selling one’s labor was viewed as a detestable practice. The ideas of freedom and liberty meant that one should work for ones self, rather than sell one’s labor to a business or elite.

Further, the notion of making a profit was viewed with disdain until the latter part of the 18th Century, even sinful according to Christian traditions.

Obviously, now America is fully inculcated in the tradition of “wage slavery” and profit making. We do it so routinely that it is done without thinking or question.

Governments have become increasingly involved in market economies to adjust anomalies resulting from the increasingly hierarchical nature of the American economy.

It is important to recognize that markets are driven by “greed”. We say we are in favor of capitalism. However, we are generally not in favor of greed. Yet, it is greed that drives markets.

As a result of this characteristic, markets are characterized by inefficiencies that occasionally develop.

Markets and capitalism are institutions that function on the basis of greed. Without greed neither would work.

Earlier we noted that the U.S. constitutional system of limited government provided the ideal environment for the development of capitalism. Hands off enables greed to run rampant.

Adam Smith envisioned a system which functioned on the basis of self-interest or greed.

However, the modern economy is not characterized by the ideal of pure market competition depicted by Adam Smith in the *Wealth of Nations*. Rather, it is characterized by economic hierarchy.

Government has increasingly become a counter balance to market hierarchies.

What Hierarchies Do I Speak Of?

Large economic organizations relative to workers. (child labor, work hours, minimum wage, worker safety)

Large economic organizations relative to communities and the people. (Banks taking economic risks is not good for communities and people).

Large economic organizations relative to production chains. → pricing (monopoly/trust)

Large economic organizations relative to small economic organizations. (Attempts to monopolize)

Large economic organizations relative to government. (Lobbying, campaign contributions)

Intervention in economic hierarchies is made possible in the U.S. by democracy and popular government.

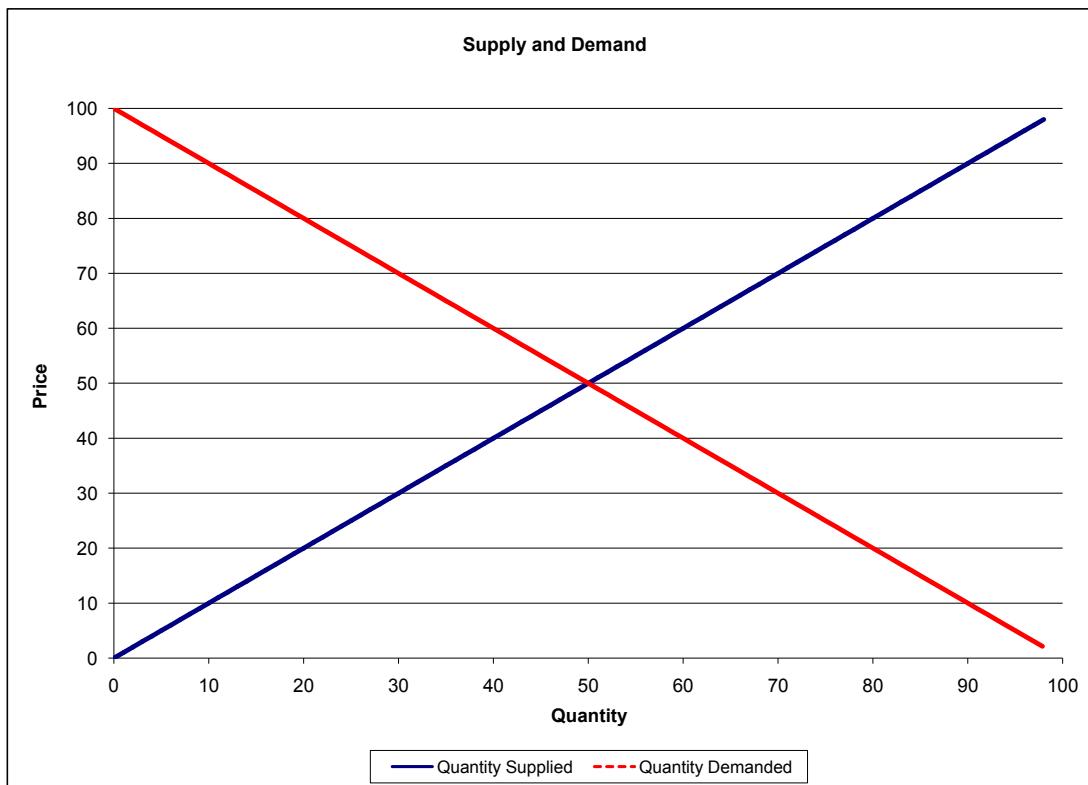
The overarching question facing citizens and what divides the parties is “how much intervention?”

In order to reasonably consider the nature of choices in deciding the amount of government intervention in the market system, we need to define and understand some terms.

EFFICIENCY

In lay terms efficiency means producing the most output for a given level of input.

Pareto Efficiency - Perfectly competitive markets are sometimes called “Pareto” efficient or “Pareto” optimal. Pareto efficient means that outcomes are socially optimal. More formally, the Pareto efficient outcome implies that no single consumer or producer is made worse off by choosing the market equilibrium, $Q_{\text{demanded}}=Q_{\text{supplied}}$. $Q_{\text{demanded}}=a-bP$, $Q_{\text{supplied}}=c+dP$.



Markets assume a minimum level of dissatisfaction with the outcome, but not necessarily that all market participants are fully satisfied.

“Self-interest” or “greed” is the glue that results in a market equilibrium. In a perfectly competitive market decentralized forces provide an “invisible hand” to assure efficient allocation of scarce goods among the many consumers. It is the individual transactions between producers and consumers that provide the allocative mechanism. Generally, this method of allocation is more efficient than a centralized or “bureaucratic” system.

Perfectly competitive markets result in economic welfare in that they result in the lowest possible price and highest quality. Markets provide freedom of choice and maximum liberty for producers and consumers.

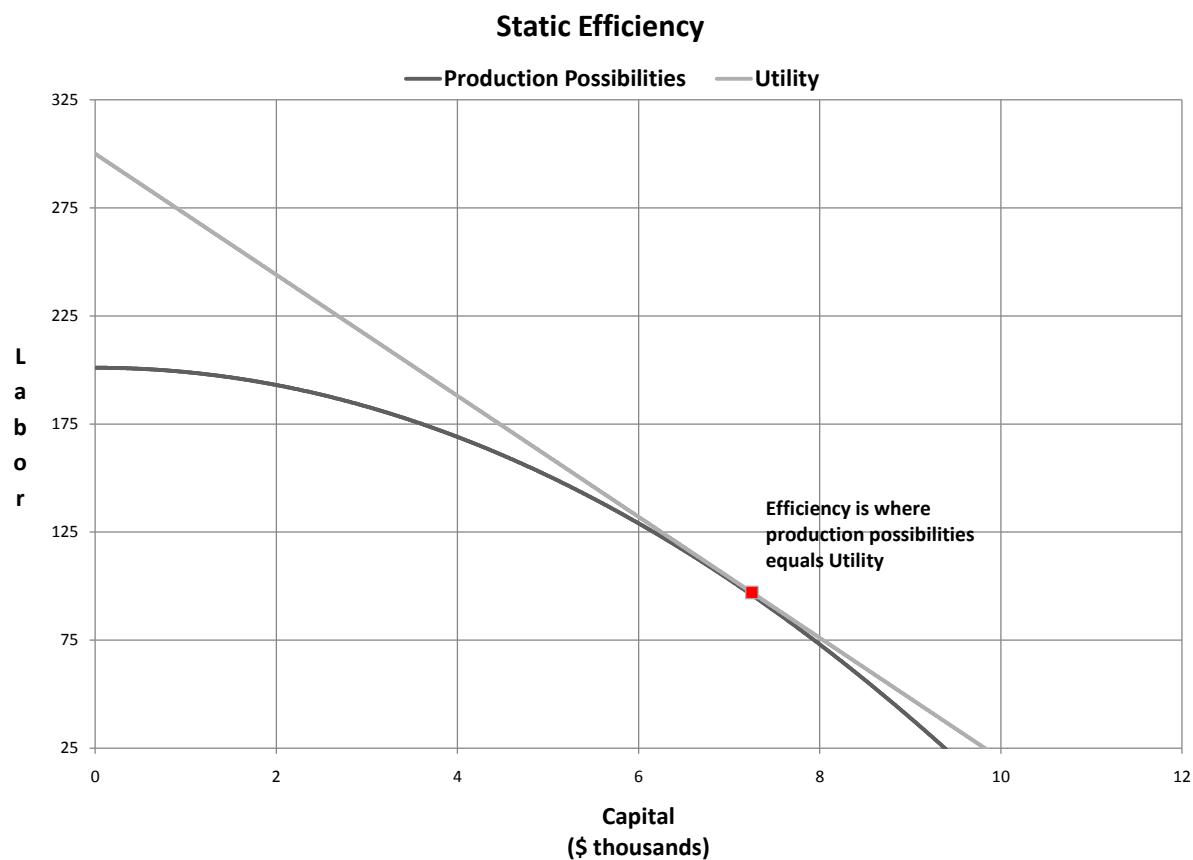
Competitive markets with no government intervention virtually always provide more efficient outcomes. The question is whether those outcomes are socially desirable outcomes. Hence, we may not always prefer the efficient outcome.

Types of Efficiency

Static efficiency-Choosing that mix of inputs that produces maximum outputs in the current time period. The presumption is that maximum utility occurs at maximum outputs/profits/etc.

Dimensions of Static Efficiency

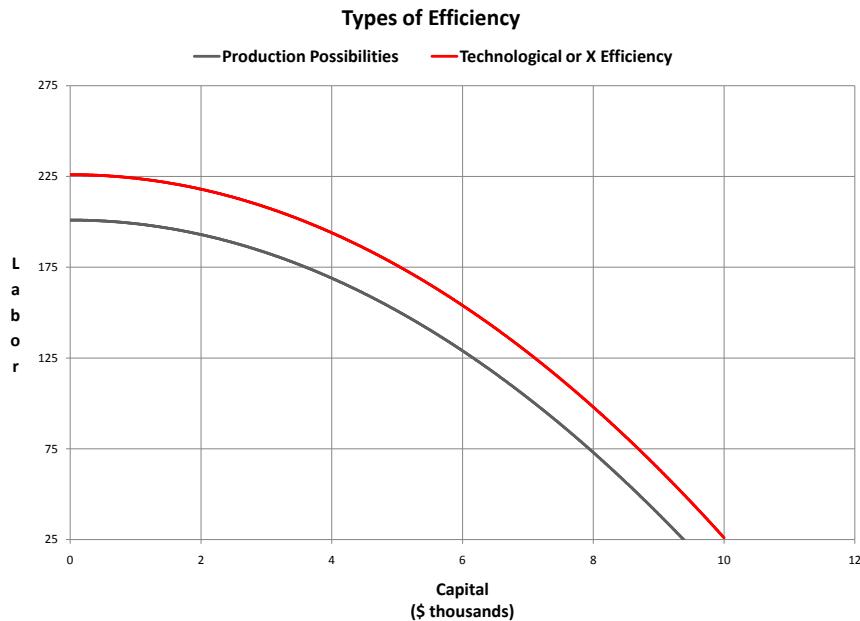
Allocative efficiency-Rearranging inputs to maximize outputs. Economists represent these relations through production functions, such as Cobb-Douglas. Example: rearranging capital and labor in a corporation to maximize efficiency.



Of course, the inputs are generally more complex than simple labor and capital and will differ with the organization or the setting. In government, inputs can be money, personnel, equipment, policies, authority, etc.

Technological or X-efficiency- Choosing the best technology for maximizing outputs, hence lowering costs and/or increasing outputs.

Alternatively, lowering costs to maximize outputs through organizational changes such as reorganization, motivating workers, or better management practices.

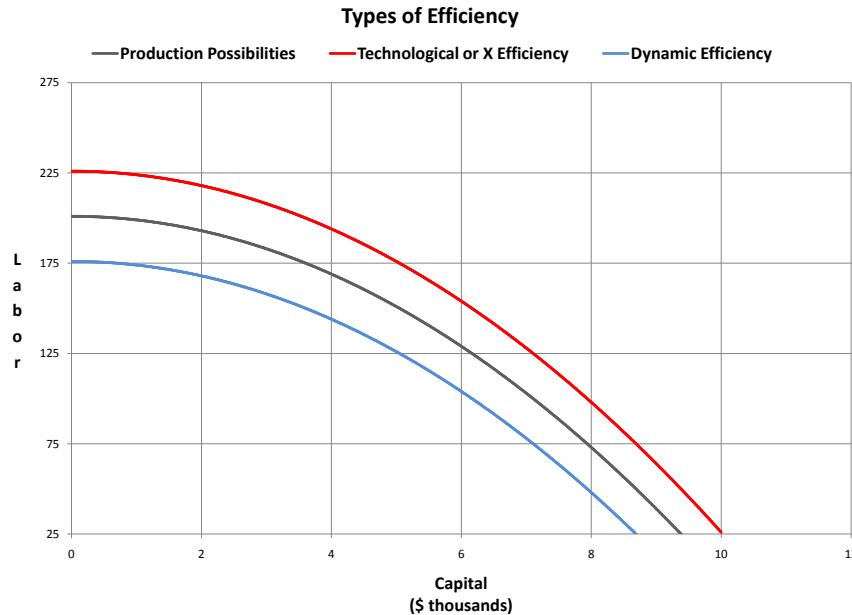


Note here that the production possibilities frontier is shifted outward by either technological improvements or efficiency enhancing organizational changes. This is obviously desirable because it increases the output possibilities and utility for the organization or society.

An example of this in government might be governmental reorganization in such a way as to limit costs of administration.

Dynamic efficiency

Choosing that mix of inputs that produces maximum outputs in future time periods. Investment in R&D, developing new products, developing new technologies, etc.



Note here that the organization does not produce on the production possibilities frontier, but holds back to invest in the future.

Dynamic efficiency implies that one produces with an eye toward the long-term, rather than short-term.

Some would argue that capitalist institutions are very bad at planning for the long-term, with their strong emphasis on short-term profits. Short-term greed can result in losses for the organization and also losses for society.

Equity

Equity means that there is a semblance of some type of equality among participants in market outcomes.

For example, the system of allocation for housing that relies on producers and consumers should **NOT** produce outcomes resulting in **ONLY** the very wealthy having homes such as often occurs in third world countries. For this reason, government in the U.S. gets involved in housing markets in various ways (loan guarantees such as through Fannie Mae and Freddie Mac, FHA mortgages, VA mortgages, civil rights housing laws, low cost housing for the low income, etc.) As a polity we emphasize trying to equalize outcomes in a marketplace that otherwise would favor the wealthy.

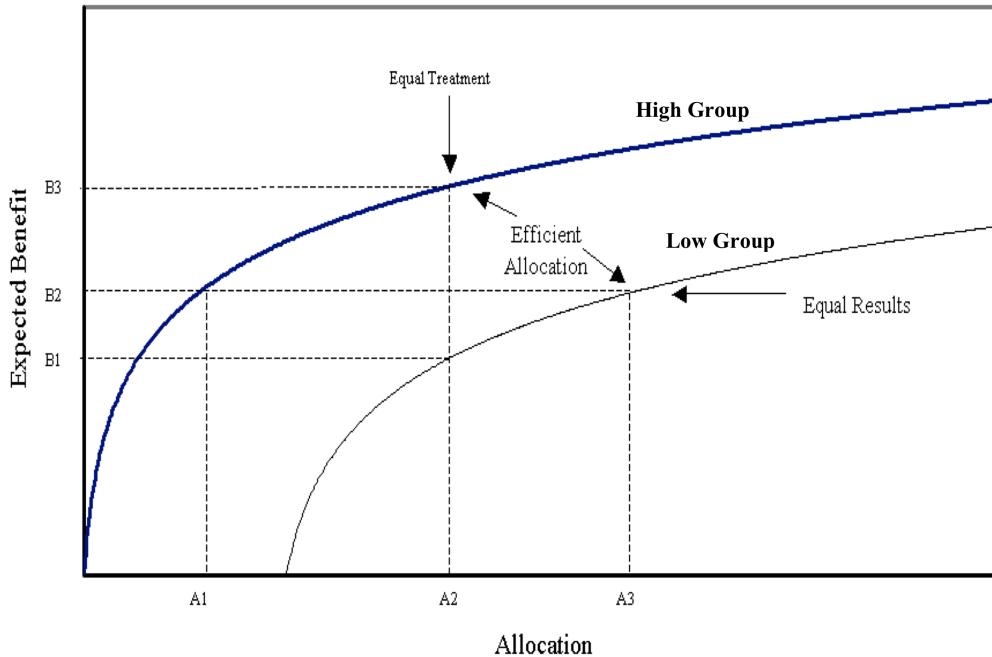
In considering equity, we must understand that there are different types of equity.

Equal Results means that each individual attains precisely the same expected benefit.

Equal Treatment means that each individual is treated exactly the same, which may mean that there are large differences in expected benefits.

Consider the following graph:

Figure 1: Criteria for Allocating Resources



The two curves are the expected benefits to two groups across all possible allocations of some benefit or penalty to groups 1 and 2. Consider, for example the allocation of subsidies and the implications of equal treatment, equal results, and efficiency.

Equal treatment would be represented at allocation A2, where the two groups are allocated the same subsidy in terms of percent of income. Here the expected benefit to the wealthy group is B3 and the expected benefit to the poor group is B1. The expected benefit to the wealthy group is much higher.

At subsidy level A1 for the wealthy group and A3 to the poor group we have equal results; the expected benefit is the same for the two groups at B2. However, note that we have to allocate a larger subsidy in terms of percent of income to the poor group relative to the wealthy group to achieve the same expected benefit.

Finally, the efficient allocation occurs when subsidy level A2 goes to the wealthy group while subsidy level A3 goes to poor group. It is efficient because the marginal benefit to the two groups is precisely equal, even though the expected benefits are not equal.

Note that according to this analysis there is an intrinsic tradeoff between efficiency and equity. Both the equal treatment and equal results allocations are always inefficient.

This type of analysis can be applied across many allocation decisions. For example, you could explore the implications of a flat tax for wealthy versus poor groups. I've used this type theoretical model in my own work to examine how the allocation of IRS audits affect efficient and equal outcomes across income groups. It could also be applied to allocations of grants across groups or states, allocation of health care benefits, allocation of scarce resources of any kind across groups or states.

The key message of this graph is that equity comes at the expense of efficiency in most allocation decisions.

Principles:

Competitive markets which operate on the basis of greed generally provide more efficient solutions.

However, not always. Sometimes greed can run rampant resulting in distortions such as the Great Depression when everyone was made worse off by miscreant behaviors. Consider also the financial crisis of 2008.

Government intervention in markets generally lowers efficiency relative to competitive markets.

However, not always if there are market imperfections.

Governmental allocation in a democracy will usually provide more equitable allocations, but at a cost of efficiency. This is because governments place a higher value on equity and community than markets, which rely on greed.

Competitive markets are amoral and may equilibrate at solutions that may be socially undesirable.

Governmental allocation or intervention in markets may (or may not) remedy socially undesirable conditions created by markets.

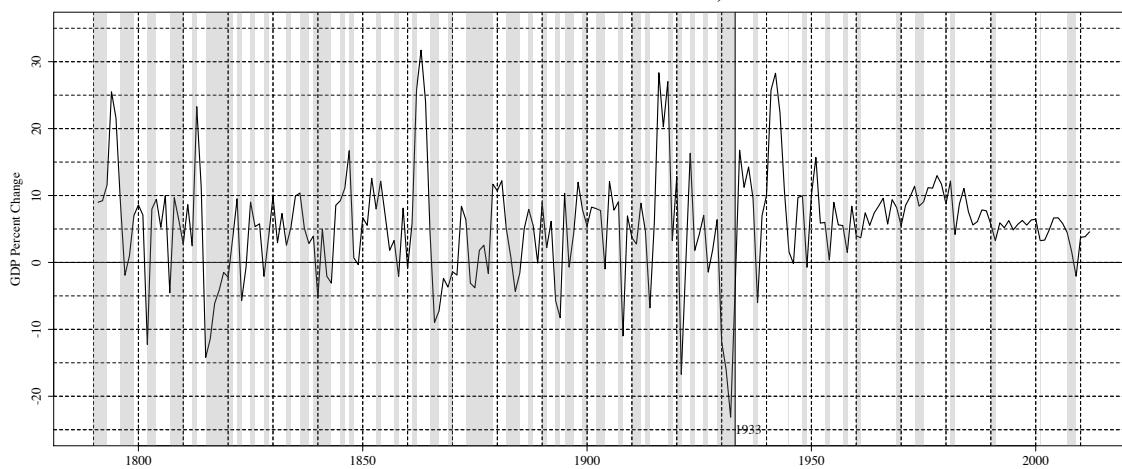
Because we live in a democracy, there is no requirement that the reason for government intervention in markets follow any pre-ordained rule about efficiency, equity, etc.

Indeed, concentrations of wealth and rent seeking behavior by groups and economic actors may produce outcomes that are also socially or economically undesirable.

POSSIBLE RATIONALE FOR INTERVENTION IN A MARKET ECONOMY

1) **At the macro-level, markets systems can be very unstable.** Show graph on GDP again here, as well as the graphs on unemployment and inflation from FRED. Note the wild fluctuations prior to 1960. Note also the financial crisis of 2008.

FIGURE 5.1: U. S. Economic Growth, 1790-2012



Note: Data from <http://www.measuringworth.com/usgdp/> (Williamson 2014). Shaded areas are economic recessions. Recession dates before 1854 are from Thorp (1926) and after 1854 from NBER (2014).

2) **Markets do miserably at promoting development.**

Early American development involved government funding for canals, roads, railroads, and later the airline industry. In modern times, government has spent on other infrastructure such as the internet, the space program, satellite communications, and wireless. Producers tend to free ride, with less incentive to invest for development.

3) **Markets are amoral and sometimes arrive at equilibrium solutions that are socially or politically unacceptable.**

Slavery, tainted drugs or food, child labor, white slave trade, pornography, discrimination, illegal drugs, abortion, etc.

4) Markets stress efficient outcomes, but efficiency is only one value that a polity is interested in achieving.

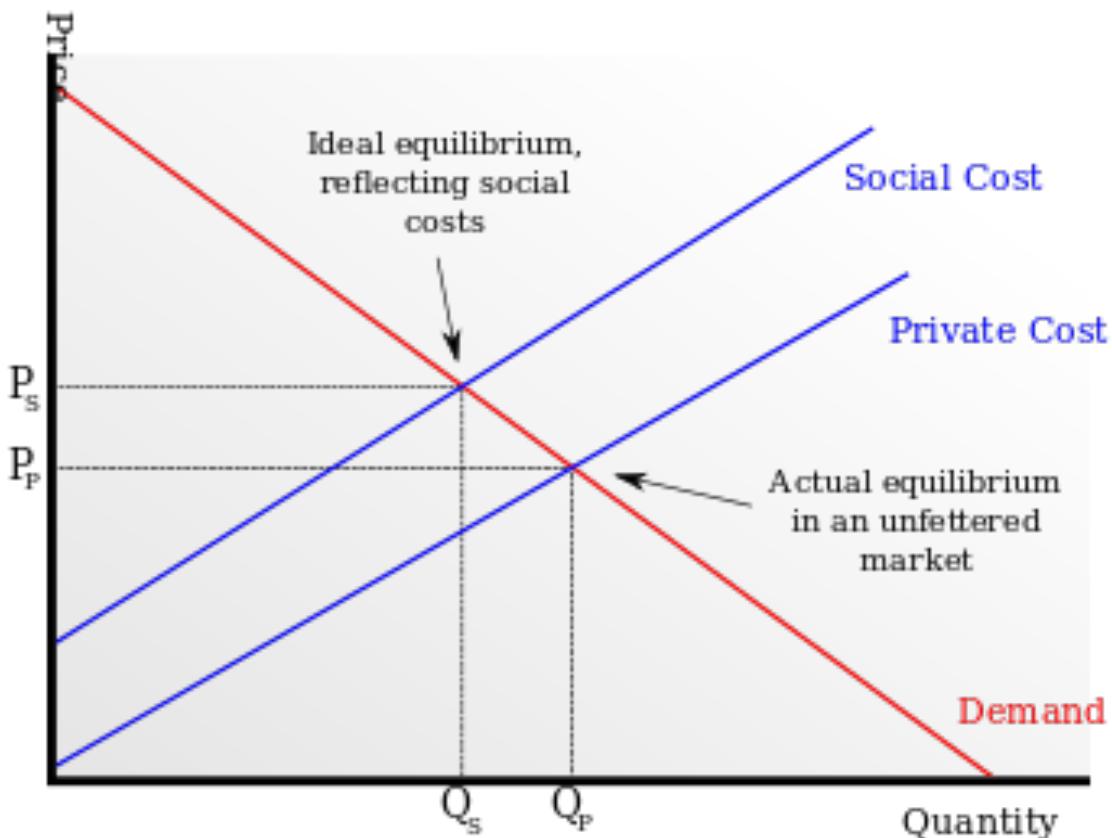
In particular, other political values include equity, fairness, accountability, participation, or simply outcomes that we as a democratic polity happen to like.

Markets often result in the perpetuation of structural inequities among social and economic classes and groups. They can also produce what we consider unfair outcomes.

5) Market Imperfections

a) The market price of a good may not reflect the true cost or benefit to producers or consumers. Hence the market is Pareto inefficient. Someone is made worse off by selecting the market equilibrium. **Negative externalities** imply that society pays costs intrinsic to the producer (the environment; worker safety), thereby reducing overall social welfare. **Positive externalities** imply that society pays costs intrinsic to the consumer (public education, public health subsidies), thereby increasing overall social welfare.

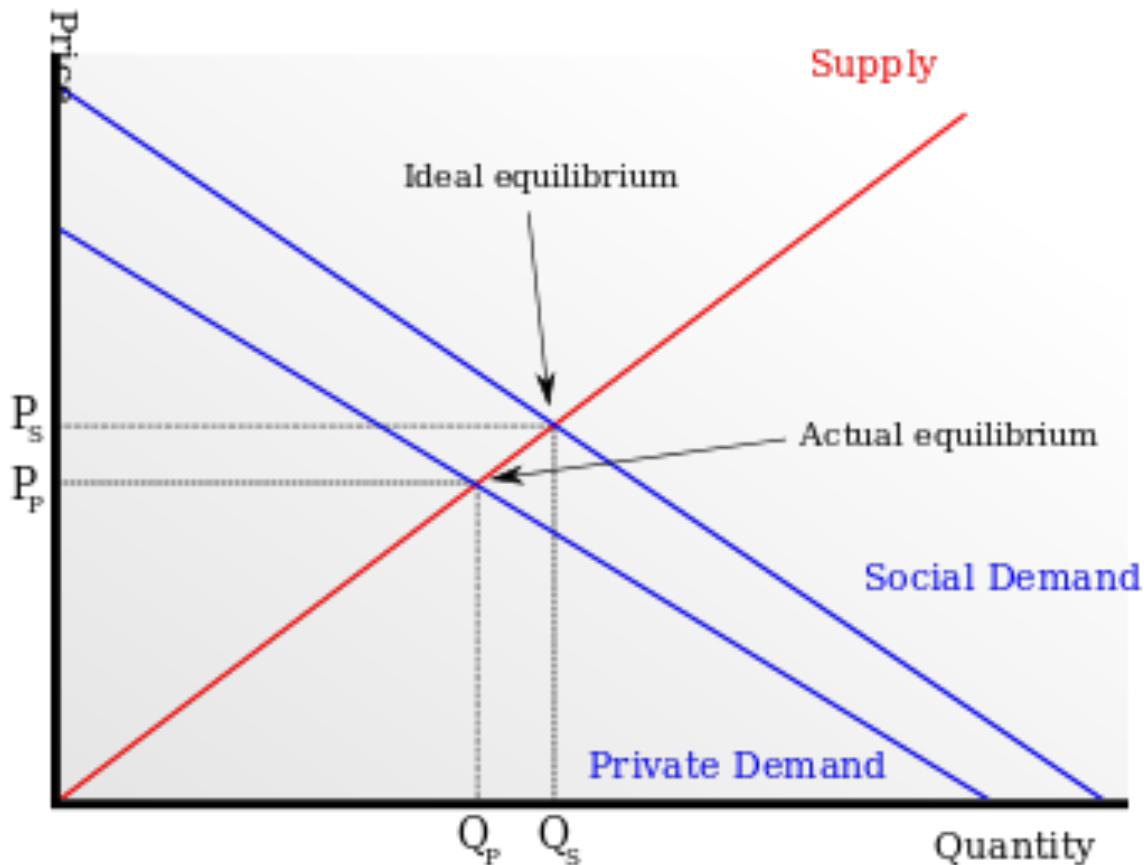
Negative Externality Analysis



Demand curve with external costs; if social costs are not accounted for price is too low to cover all costs and hence quantity produced is unnecessarily high (because the producers of the good and their

customers are essentially underpaying the total, real factors of production.)

Positive Externality Analysis

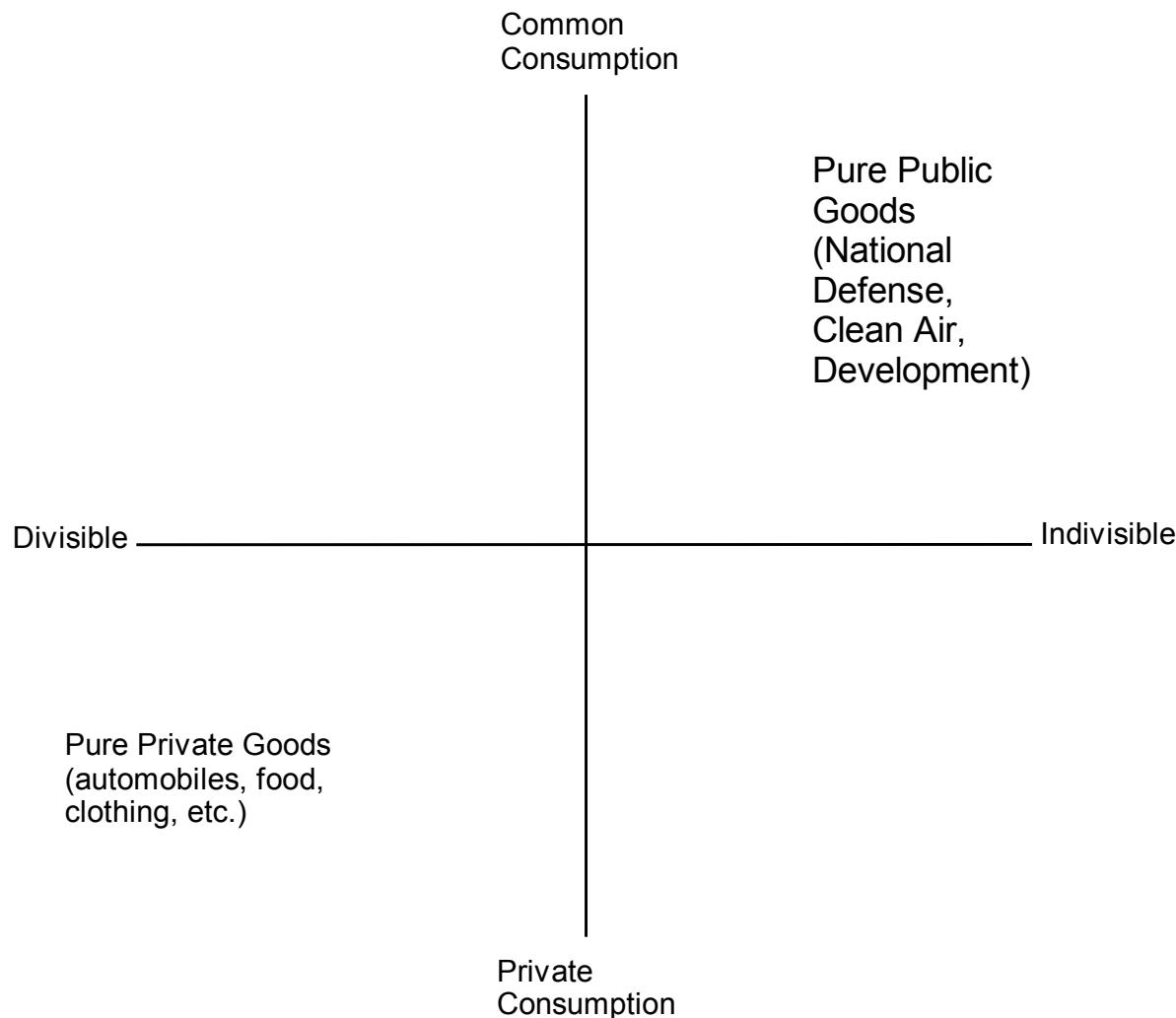


Supply curve with external benefits; when the market does not account for additional social benefits of a good both the price for the good and the quantity produced are lower than the market could bear.

b) Collective Action Problems

Markets tend to under-produce some goods, especially those involving collective action and free rider problems.

For example, development as mentioned above is underfunded in a free market. Other goods, as well. Consider the following chart.



Pure public goods and other goods having the characteristics of a) Indivisibility and b) Free Riding possibilities due to common consumption. National defense, economic development policies, security, etc. Discuss mixed goods such as highways, garbage collection, police protection, electric power.

c) Competition may not always be the optimal approach where cooperation is necessary for the good of society.

Applies to pollution control, fishing, etc.

Consider a thumb wrestling contest for this rationale.

Thumb wrestling.

One purpose of government is to facilitate cooperation. The tragedy of the commons suggests that without government there are certain problems that cannot be resolved individually. Discuss the case of the tragedy of the commons. Discuss the issue of "overfishing" in the North Atlantic.

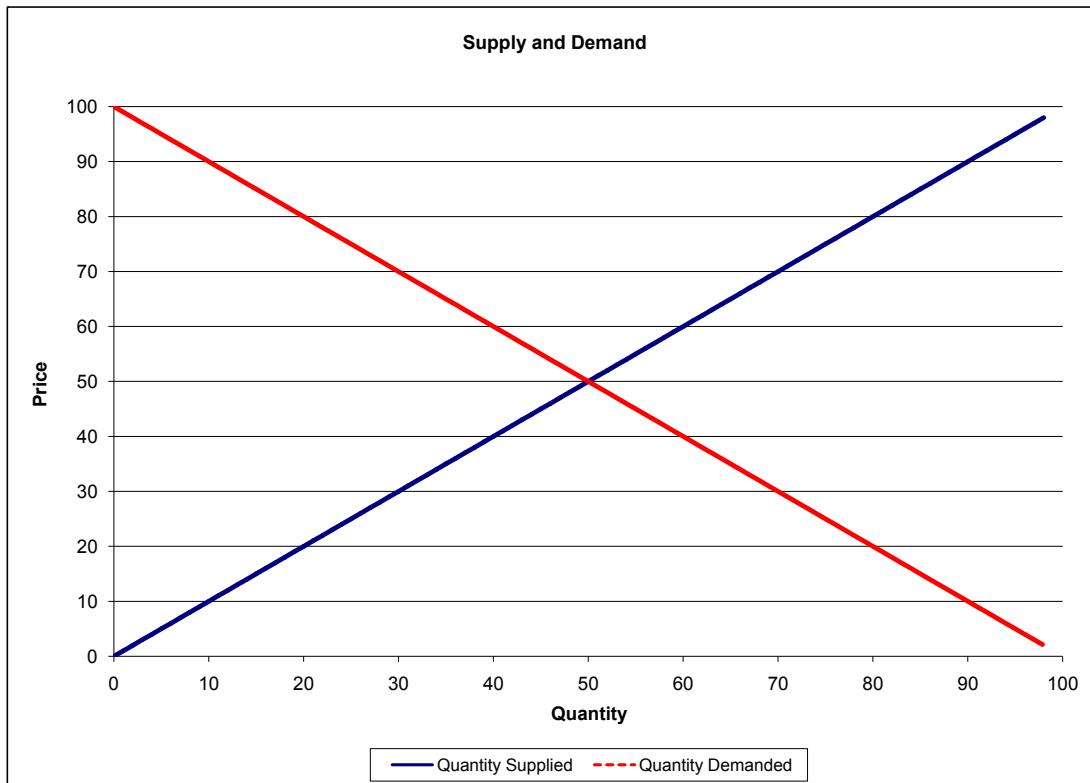
For the thumb wrestling project have the students pair off into groups of three. Offer a prize of say, 1 point on the midsemester exam to members of the group getting the most "pins" in say 60 seconds. Two thumb wrestlers and one score keeper. The winner will be the group who cooperates. Agree: You pin my thumb 45 times in a row and I'll pin yours 45 times in a row.

What this demonstrates is that in the absence of any guidelines for cooperation, MOST people will act in a self-interested manner, which may not be good for the group. In this case that means thinking only of trying to pin the other's thumb, while instinctively trying to avoid being pinned.

Discuss the tragedy of the commons. Sheep farmers live on an island. There is a limited number of acres of land for grazing. In an unregulated condition, each farmer is allowed to have a flock of any size. However, this may result in overgrazing. What happens if the sheep eat all of the grass? What is the solution to this problem?

d) Increasing and Decreasing Returns

Perfectly competitive markets should result in Pareto efficiency.

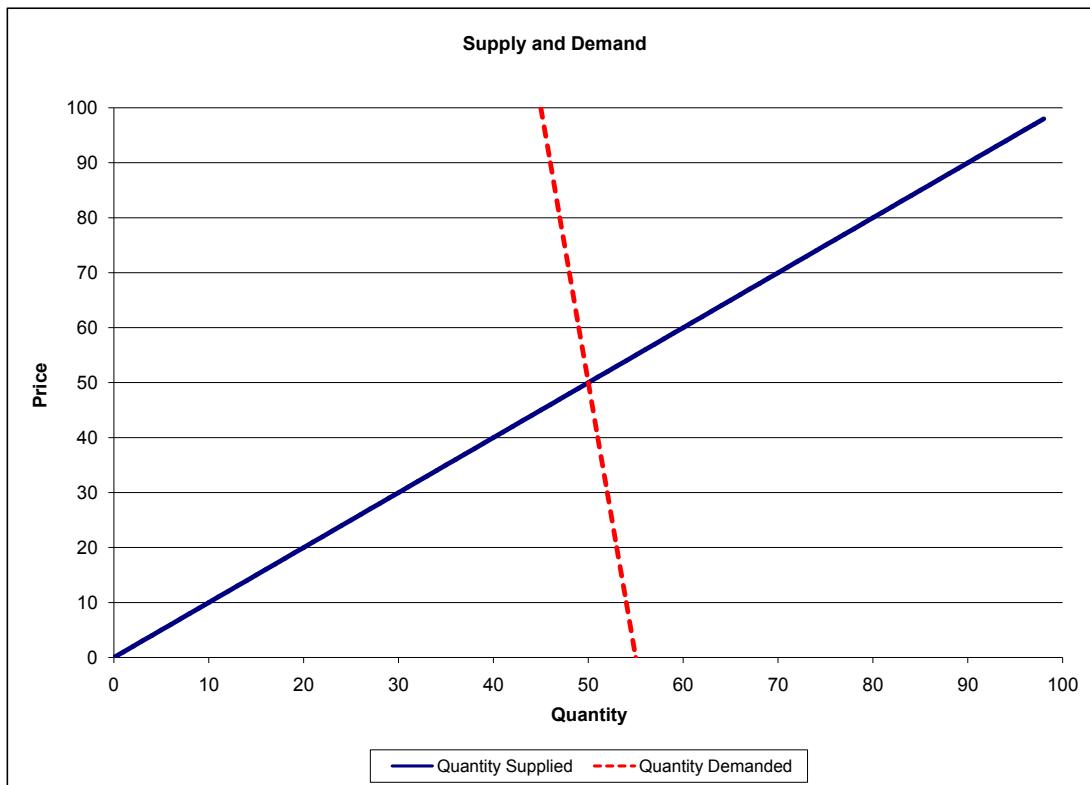


Pareto efficiency occurs in this graph when $p=50$, $q=50$, and total revenue $pq=2500$

The assumption is that there are a large number of producers and that consumers will vary in their demand for what is produced.

Markets must be competitive to produce these optimal outcomes for society.

However, there may be too little competition. If this condition coincides with demand inelasticity, then producers have a lot of power over prices. This results in **increasing returns to the producer**. The producer has more control over the price than would occur under fair competition. That is, demand changes very little as a function of price.

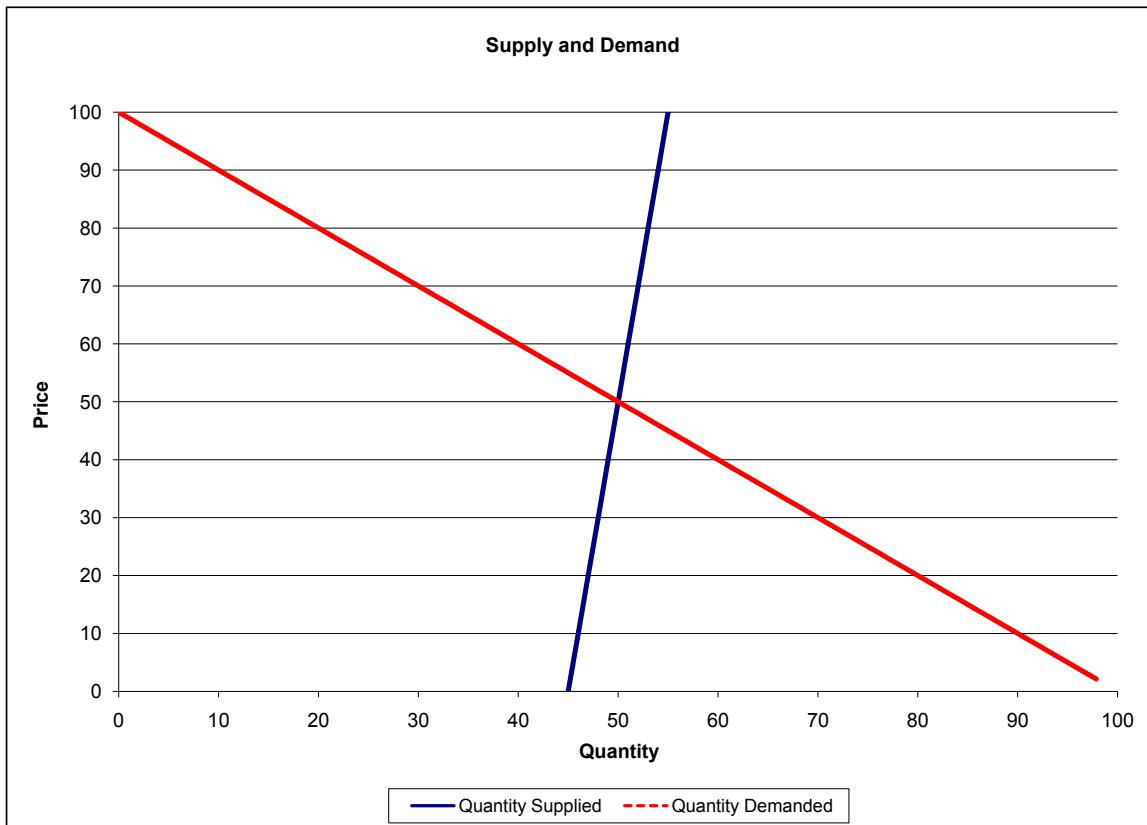


In the earlier graph reflecting free markets we had an equilibrium price of 50 with a quantity equilibrium at 50 for a total revenue, $pq=2500$. In this graph we also have total revenue for the producer at $pq=2500$. However, note that the producer now has liberty to increase the price and likewise increase profits. For example, suppose the producer increases price to 60, but does not change supply. Because demand is inelastic, the quantity demanded doesn't fall very much perhaps due to need, say to 48 as in this graph. The producer's revenue becomes

$pq=60*48=2880$. Returns have increased substantially through price manipulation.

This may also be reflected in the degree of economic concentration for the industry or simply a difference between prevailing prices of market goods and their competitive prices. Specific examples: Monopoly, oligopoly, etc; Medical care, funeral home pricing, gasoline prices, fuel oil prices in the winter, etc.

Markets may also be too competitive, resulting supply inelasticity. Result is decreasing returns to producers. In other words, consumers control the price, so producers can't get a fair price for their product.



In this graph, the supply remains about the same across a wide range of prices (inelastic). Producers have little or no control over price. Their total revenues (pq) may vary dramatically as consumers can offer lower and lower prices due to having abundant supply. For example, suppose consumers drive the price down to 40. From the bottom axis, producers only produce 48 at this level. This means that total revenues for the producer are $pq=40*48=1920$. Producers would have to supply more than 60 units to maintain the same level of revenue.

This may also result in unstable supply over time as producers go out of business, not being able to supply enough to maintain their needed revenues. Example: small farmers in a perfectly competitive market.

Here, producers have no pricing power, with the result that many go out of business. This is bad over the long term, because it means that supply can be unstable.

Examples: Small family farming, as before the Great Depression and into the 1970s. Electric utility markets before regulation. See Stigler and Friedland (1962) on the effects of regulation on prices.

e) Other market imperfections. The pure competition model assumes a number of other things for markets to be efficient.

- perfect information
- competition
- a large number of consumers
- a large number of suppliers
- free entry conditions
- neither demand nor supply is inelastic
- no restrictions on technology.

Thus, additional market imperfections can occur for various other reasons including

- a) information asymmetries
- b) barriers to entry
- c) collusion in competition
- d) other factors setting price or demand/supply such as discrimination
- e) technological restrictions such as patents or copyright
- f) licensing
- g) unions
- h) disparate bargaining power.

Examples.

Information asymmetry – food and drug safety, consumer product safety

Barriers to entry – high startup costs for some industries

Discrimination sets price of wages, not economic factors

Technological restrictions – patents, copyright restrict supply and limit competition.

Legal restrictions – occupational licensing by interest groups to restrict market entry; licensing by interest groups. A rationale for government intervention.

Disparate bargaining power – borderline. Says producers may have too much power to set prices/wages. Thuggery.

9) Markets may under some circumstances underemphasize issues of dynamic efficiency in preference for allocative/static, x, or technological efficiency. Hence, under investment in products that would enhance social and economic efficiency over the long term. Hence, we rely on governments to support infrastructure such as communications infrastructure, technological development, the internet, etc.

10) As a democratic polity we need no justification for intervention. We may intervene because the people are sovereign over economic actors in our system.