Competitive Markets and Externalities

Unit	Price	Cost	Personal Nuisance	Payoff (per unit)
1	$4.30	$1.70	$0.13	$2.47
2	$3.96	$3.33	$0.13	$0.50
		Total Nuisance caused by others		-$1.07
Total				$1.90

Figure 2.1

History

Round	1
RobotDogs Sold	2
Your Nuisance	$0.13
Market Payoff	$3.23

12 | 00:00

Figure 2.2

Unit	Price	Cost	Personal Nuisance	Payoff (per unit)
1	$3.54	$1.70	$0.20	$1.64
2	$1.62	$3.41	$0.20	-$1.99

Permit Market Payoff -$3.48

Total Nuisance caused by others -$0.60

Total -$4.43

End of Game   8 | 00:00

Figure 2.3

History

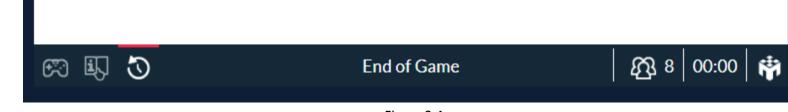| Round	1	2
RobotDogs Sold	2	2
Your Nuisance	$0.20	$0.20
Market Payoff	$0.43	$0.5
Permit Market Payoff	-$2.93	-$3.48
Total Payoff	$0.43	$0.5

End of Game

8 00:00

Figure 2.4

Government Tools

Government intervention can take the form of Command and Control (CAC) or market-based policies when an externality induces market failure and ineffective resource allocation. As stated by Mankiw (2021). Contrarily, CAC policies deal with behavior directly, while market-based policies encourage private decision-makers to handle the issue on their own. The objective of CAC strategies may vary depending on the externality in question, aiming to either incentivize or discourage specific behaviors. A CAC approach, wherein the Environmental Protection Agency imposes restrictions on enterprises' emissions of contaminants into the atmosphere, could potentially be adopted by the government. As a consequence of this regulation, organizations are obligated to comport themselves in accordance with particular standards. Remedial taxes and subsidies, as well as the exchange of pollution permits, are examples of market-based policies. Carlin & Bowles (2020). Corrective taxes are one approach that may be used to guarantee that private leaders are conscious of society's costs, which they have to take into consideration in combination with the adverse externality. This can be accomplished through the utilization of corrective taxes. An example that exemplifies this concept is the ability of the Environmental Protection Agency to levy charges on businesses proportional to the amount of pollution they generate. The ability of businesses to purchase and sell pollution licenses gives pollutants leverage in the international struggle against pollution. In the event that an organization's annual emission falls short of the maximum allowable quantity of 500 tons of pollution as determined by the Environmental Protection Agency, it may engage in negotiations with another company to repurchase the remaining 200 tons of dispersed pollution. Both companies benefit from the agreement, which also ensures adherence to the predetermined emission level mandated by the Environmental Protection Agency.

Supply and Demand

Supply and demand equilibrium is disrupted whenever the government uses one or more of its powers to intervene in the market. Businesses are inclined to decrease the costs at which they offer their products for sale, thereby stimulating consumer demand for such commodities when the

government offers financial assistance to them (Stansak, 2020). An imbalance is corrected by the demand and supply forces of the market when the purchasing power of consumers is diminished as a result of a reduction in taxes imposed by the government on manufactured goods. Conversely, inequities between supply and demand typically result in price increases.

Government intervention in the market's equilibrium between supply and demand is illustrated through the simulation game. Its intervention lowers the expenses of each item in the game, which causes their worth to stay the same or even be raised. Thus, it decreases the cost associated with addressing nuisances per individual. The items' supply curve shifts towards the right, which means it rises, and equilibrium demand rises because the government lowers prices, which increases customers' purchasing power and shifts the supply-demand balance.

Producer or Consumer Surplus

The imposition of taxes by the government may result in an economic surplus for both producers and consumers. It is more significant how taxes reduce the surpluses of consumers and farmers than the exact quantity of tax paid, whether directly or indirectly. For instance, a $1,000 per gallon milk tax does not generate any additional tax revenue because it ceases legal milk production. On the contrary, the implementation of this tax induces substantial economic harm by depriving both producers and consumers of surplus (Mankiw, 2021). Additionally, taxes reduce the volume of commerce as a whole, which reduces earnings. An increase in consumer prices results in an equivalent reduction in consumer surplus. A reduction in supplier prices results in an equivalent decrease in surplus capacity or profit. Further instances of government intervention that result in consumer and producer surpluses include import tariffs, price controls, and price ceilings.

References

Bowles, S., & Carlin, W. (2020). What Students Learn in Economics 101: Time for a Change. *Journal of Economic Literature*, *58*(1), 176–214.

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Mankiw, N. G. (2021). *Principles of Economics* (9th edition). Cengage Learning, Inc.

Stansak, J. (2020, November 15). *The Effects of Government Intervention in Markets | Fiveable*. https://library.fiveable.me